



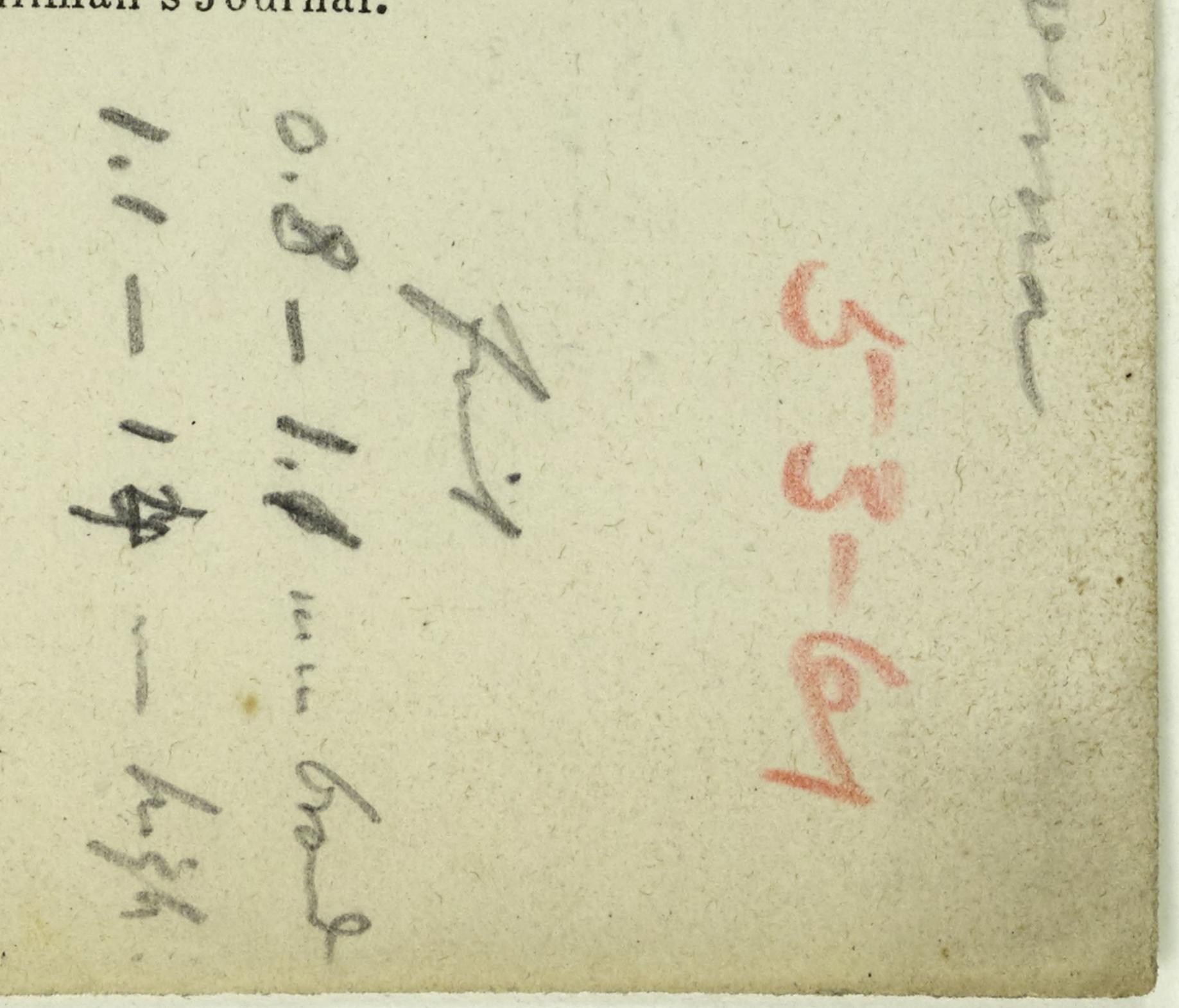


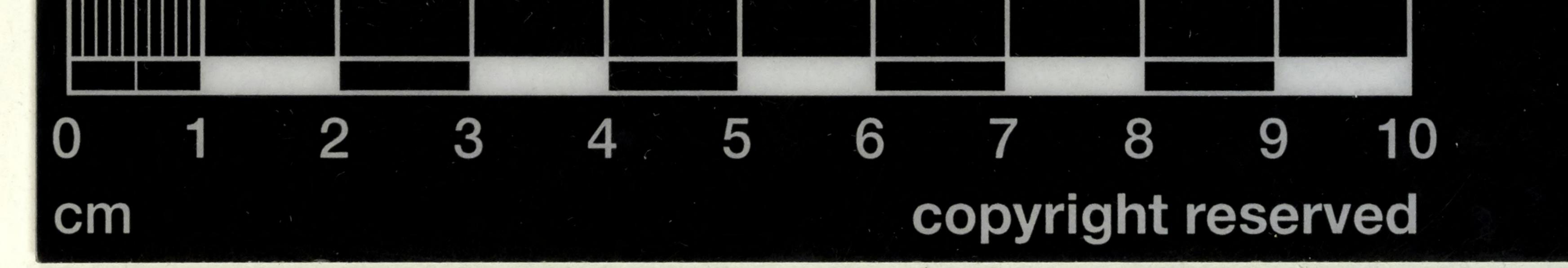
so much interest among scientific men.\* And such was his energy that, almost unaided, he gathered in a few weeks the extensive collection of fossil bones which furnished to Dr. Leidy the materials for his splendid memoir on the "Extinct Fossil Fauna of Nebraska." At the same time he collected a large and elegant series of Cretaceous fossils, some of which were described and figured by Dr. Owen in his final report on the Geology of Iowa, Wisconsin and Minnesota. The notes made by Dr. Evans on the geological features of that remarkable region were likewise of the highest interest, and from these Dr. Owen has compiled one of the most instructive and beautiful chapters to be found in his valuable report. In addition to his scientific duties, Dr. Evans had almost exclusive control of the business department of Dr. Owen's survey, which of itself involved an immense deal of labor. The satisfactory manner in which he discharged these onerous duties, often in the midst of disheartening privations and even danger, commanded the highest esteem and confidence of Dr. Owen and his associates, while his goodness of heart, uniform courtesy, and self-sacrificing disposition, secured to him their warmest friendship.

After the completion of the field work of the North-west Survey, (1850,) Dr. Evans received the appointment of U. S. Geologist for Oregon, which he accepted, and immediately entered upon the duties of his new office with his usual energy and zeal. The survey was organized by the appointment of Dr. B. F. Shumard to the position of Principal Assistant, who shortly after embarked for Oregon, by way of the Isthmus of Panama. Dr. Evans determined to revisit Nebraska, and thence proceed overland to Oregon by an unexplored route, with the view of determining the general geological and topographical features of a vast region, then almost unknown to science, and of ascertaining if there existed a nearer way from the Upper Missouri to the Oregon coast than that usually travelled. He proceeded to St. Louis, and there spent a few days in making preparations for his journey. He then took passage for Fort Pierre Chouteau, on board a steamer belonging to the American Fur Company. During this passage, which occupied nearly a month, cholera to an alarming extent prevailed among the passengers and employees of the Fur Company on board, several of whom died, and the mortality would have been far greater but for the kind attention of Dr. Evans, who, though himself laboring under an exhausting diarrhæa, allowed himself no rest, but in the triple capacity of physician, nurse and companion, was ever at the bed-side of the sick, administering to their wants, and encouraging them by his cheering words.

From Fort Pierre, Dr. Evans again visited the Mauvaises Terres, where in a short time he succeeded in obtaining a large collection of the fossil fauna of that region, even more extensive than his former one, and embracing a considerable number of new and interesting species. On his return to the Fort he set about preparing for his long journey, which from the hostility of the Blackfeet and other Indian tribes, together with the difficulties incident to the route, was regarded by the Indian traders as extremely hazardous; hence it was exceedingly difficult to find either guides or hunters willing to accompany him. After much persuasion, however, he succeeded in procuring the services of two hunters and a half-breed guide, they agreeing to go with him as far as the Flathead Village. With this meagre escort he started from Fort Pierre, but scarcely had he reached the borders of the Blackfeet country ere his hunters became alarmed, and unceremoniously left his camp during the night and returned to the Fort. Under these discouraging circumstances a person less courageous than Dr. Evans would have turned back; but difficulties served only to develope the indomitable

<sup>\*</sup> To Dr. Hiram A. Prout is justly due the credit of having first called attention to the existence of such remains in that region by his excellent memoirs of Palæotheroid and other bones, published in Silliman's Journal.







energy of his character, and with but a single man as his escort, and no other guide than his compass, he determined to continue on his course. After a wearisome travel of many days, and having encountered many privations and dangers, he and his companion, Cadotte, arrived safely, but in almost a starving condition, at the Flathead Village, situate on the western slope of the Rocky Mountains. In accomplishing this part of his arduous task, Dr. Evans passed directly through the heart of the Blackfeet country, and travelled a distance of more than two hundred miles in the main chain of the Rocky Mountains before he succeeded in finding a passage to the valley beyond. It is much to be regretted that the credit of the discovery of this important pass, which unquestionably belongs to the subject of the present sketch, has been unjustly transferred to another. It should have been named in honor of Dr. Evans instead of Cadotte, since it is well known that the latter person had no knowledge of such a passage, and, in fact, had not even been in that region before he went there under the guidance of Dr. Evans. After a few days' rest at the Flathead Village our traveller resumed his journey, and without encountering further difficulties, reached Oregon city with much valuable information concerning the extensive district of country through which he had passed.

In the prosecution of the geological survey of Oregon and Washington, Dr. Evans was actively engaged for nearly five years, during which period his travels extended over a large portion of those Territories. The results of his important labors, embracing a large amount of information relating to the geology, topography, geography and natural history of that interesting portion of the American continent, are embodied in his large report submitted to, and ordered to be printed by Congress at its last session. It was placed in the hands of the Public Printer only a few days previous to the death of its lamented author, and it is a matter of deep regret, that, owing to some informality, its publication must be delayed to await the further action of Congress. It is earnestly hoped that Congress will, at an early period, make the necessary provision for the printing of this important document, the preparation of which has cost such a large expenditure of labor and money, and which promises to be of the highest value to science and the people for whose benefit the survey was ordered.

GEORGE ENGELMANN PAPERS

## September 2, 1861.

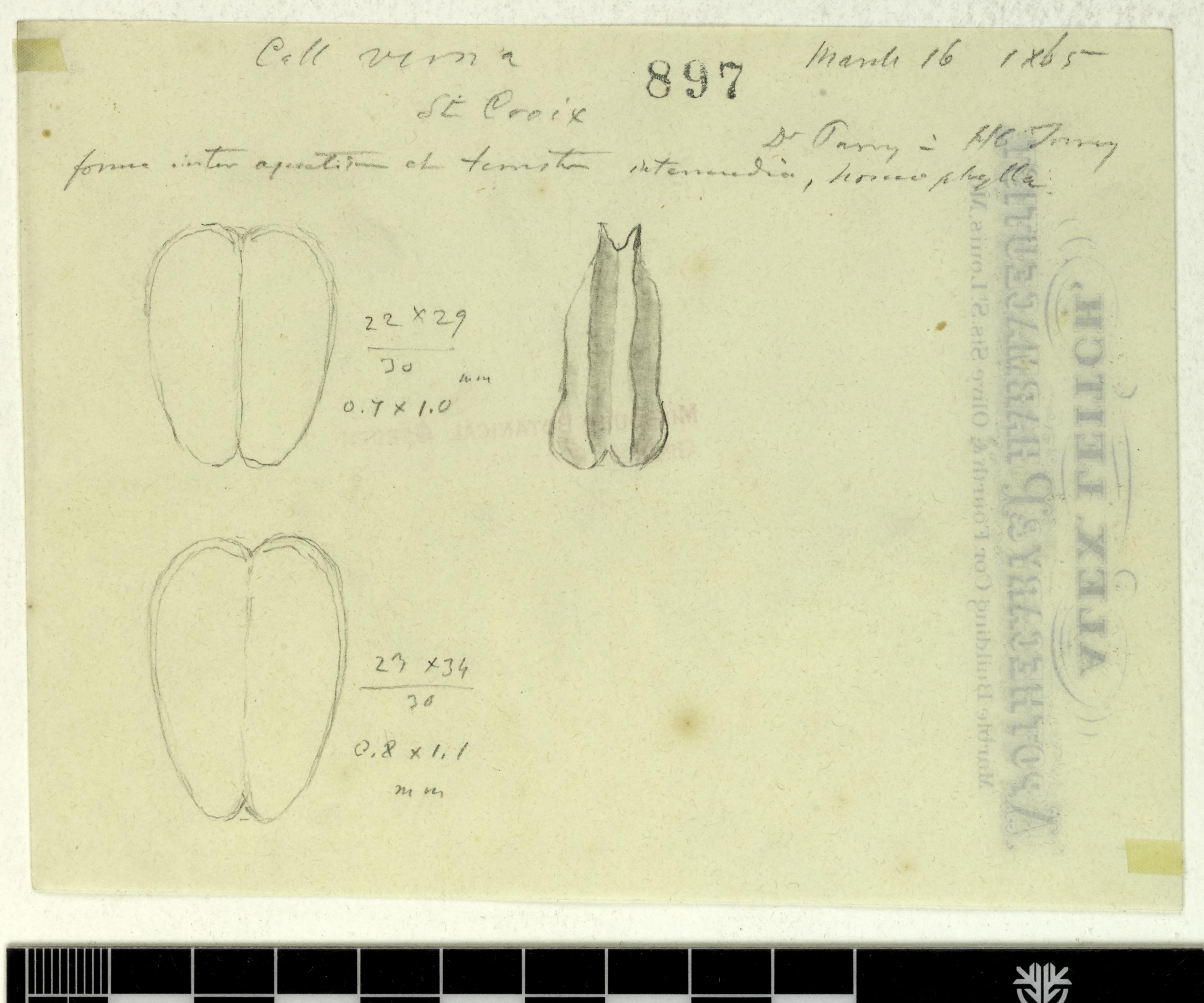
The President, Dr. Engelmann, in the chair.

Seven members present.

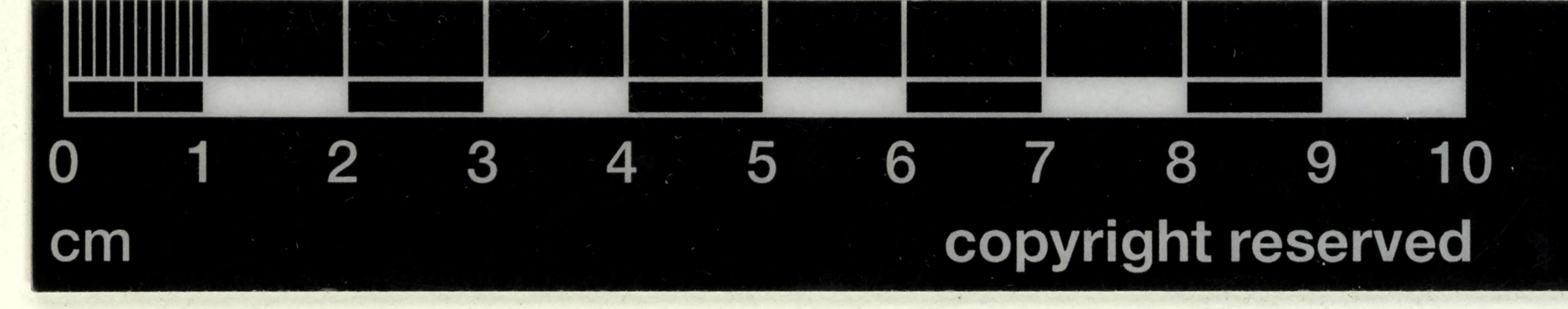
The following donation to the library was received: Bull. de la Soc. Imper. zool. d'Acclimatation, Paris, No. 7, Juillet, 1861, from the Society.

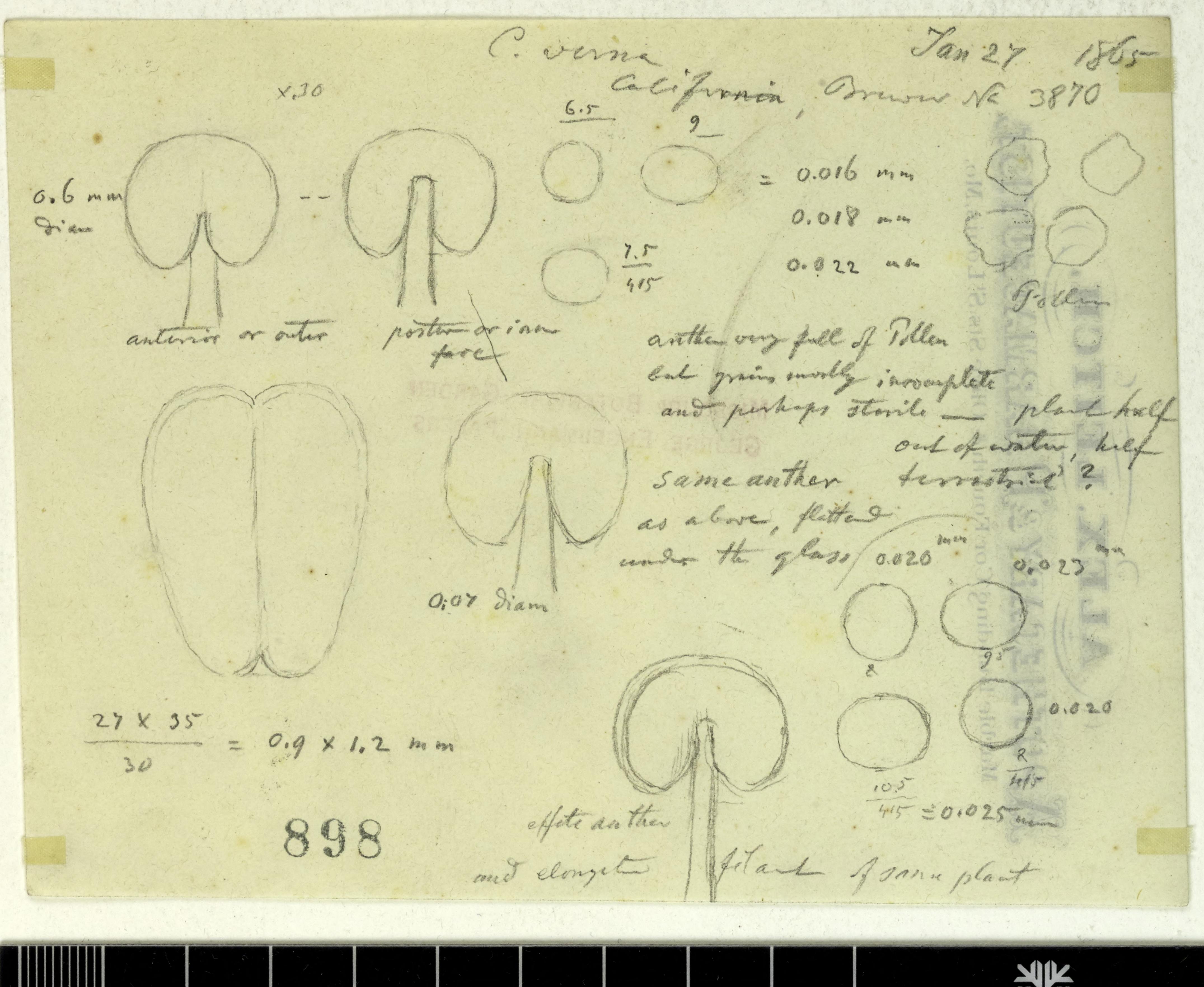
Mr. Holmes presented from Dr. B. F. Shumard the following skulls from Texas: Felis pardalis, Linn. (Tiger-cat), from Travis Co.; Felis onza, Linn. (Jaguar), from Hays Co., and Dicotyles torquatus (Peccary), from Travis Co.

Dr. Engelmann made some remarks on the temperature and humidity of the past three summer months. June and August were by more than two degrees warmer than the averages for these months, while July was cooler. The quantity of rain for each of these months was below the average



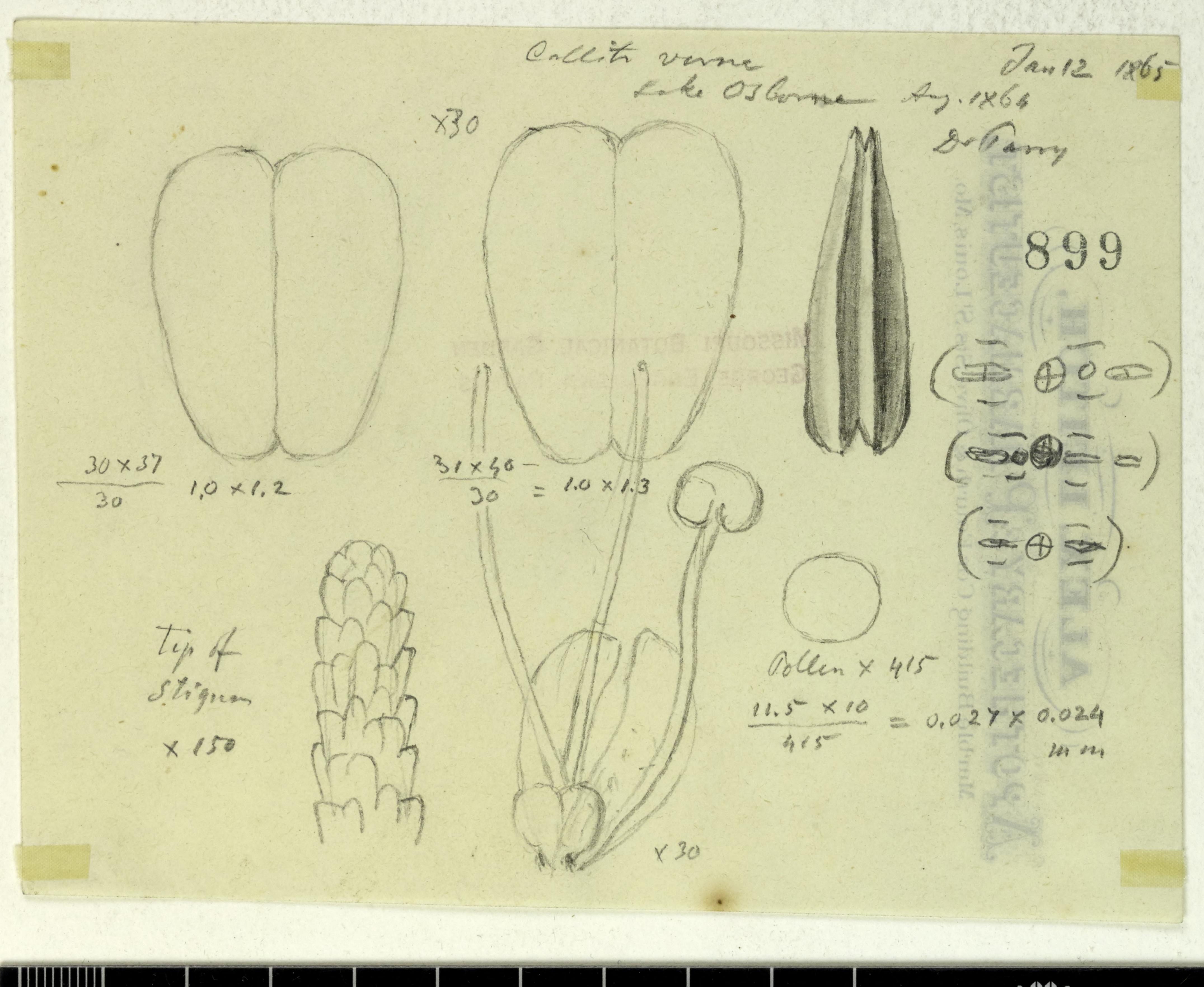


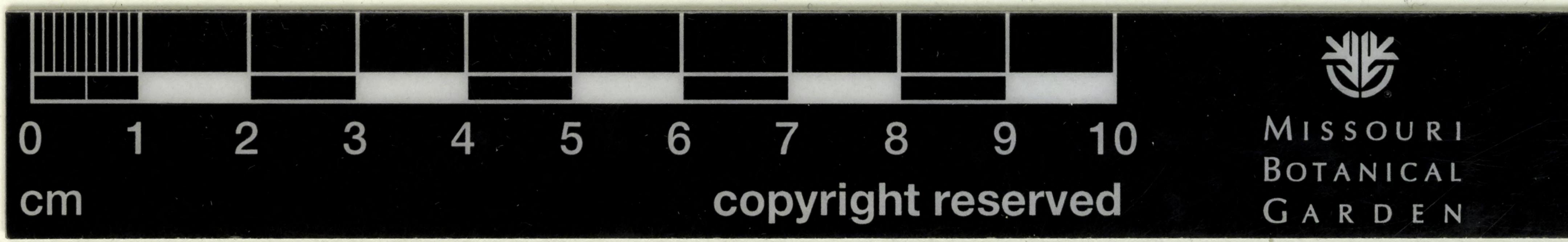


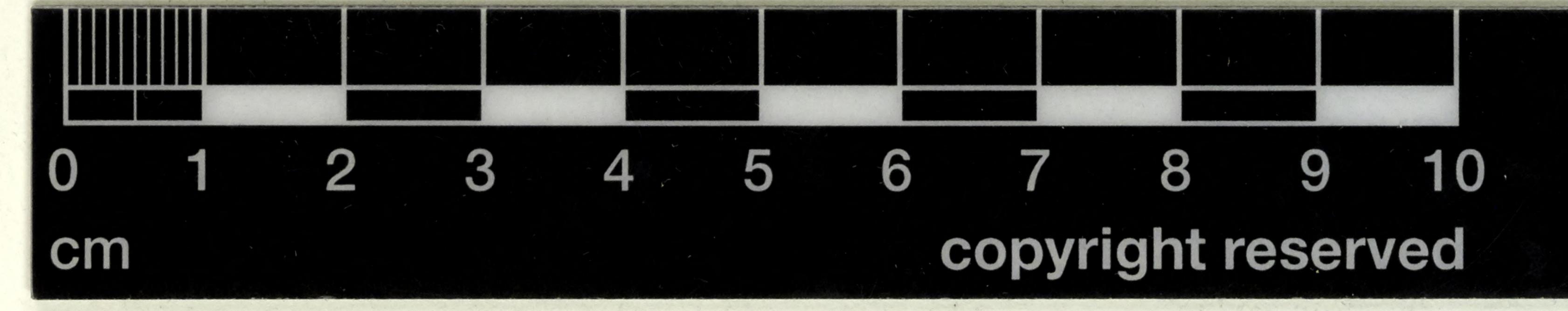


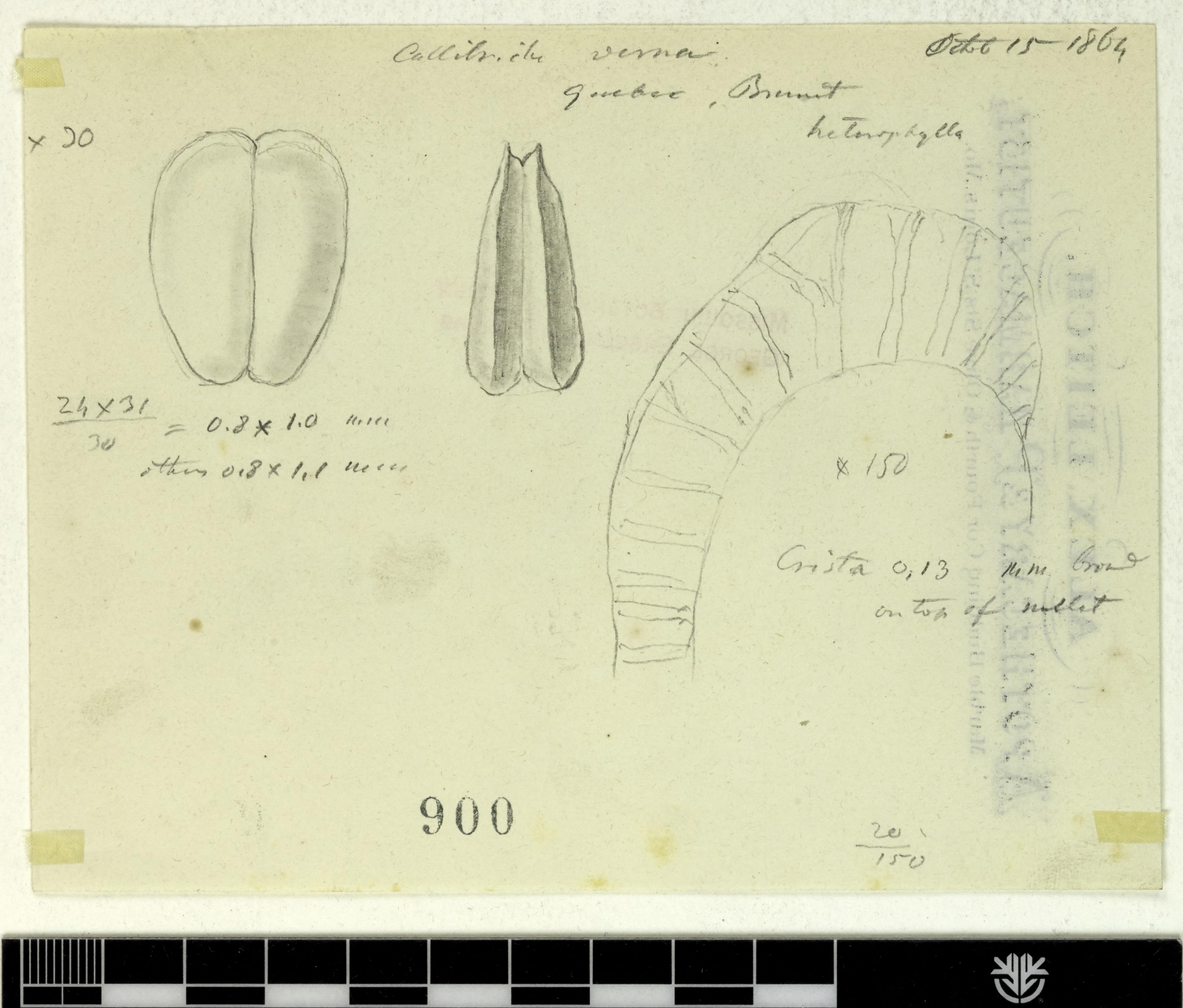


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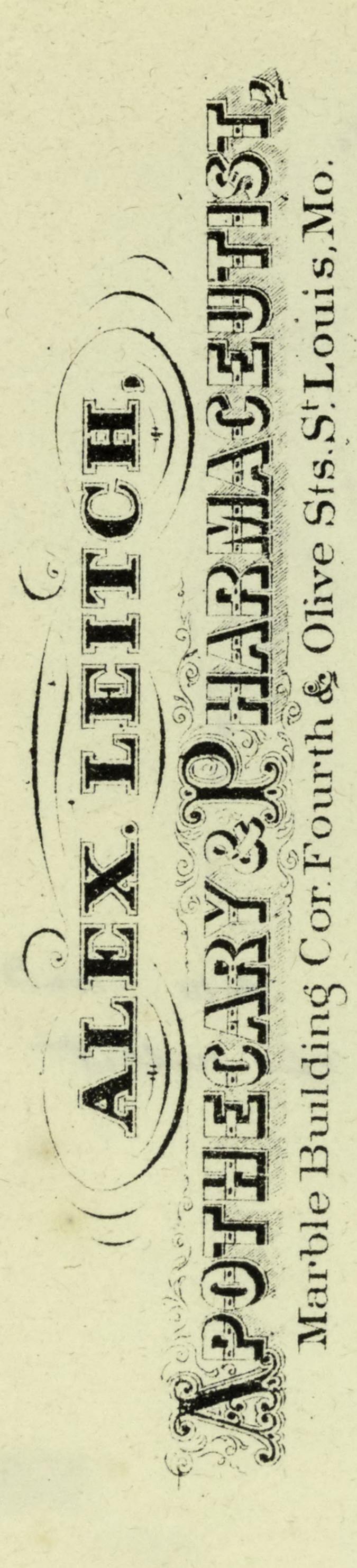




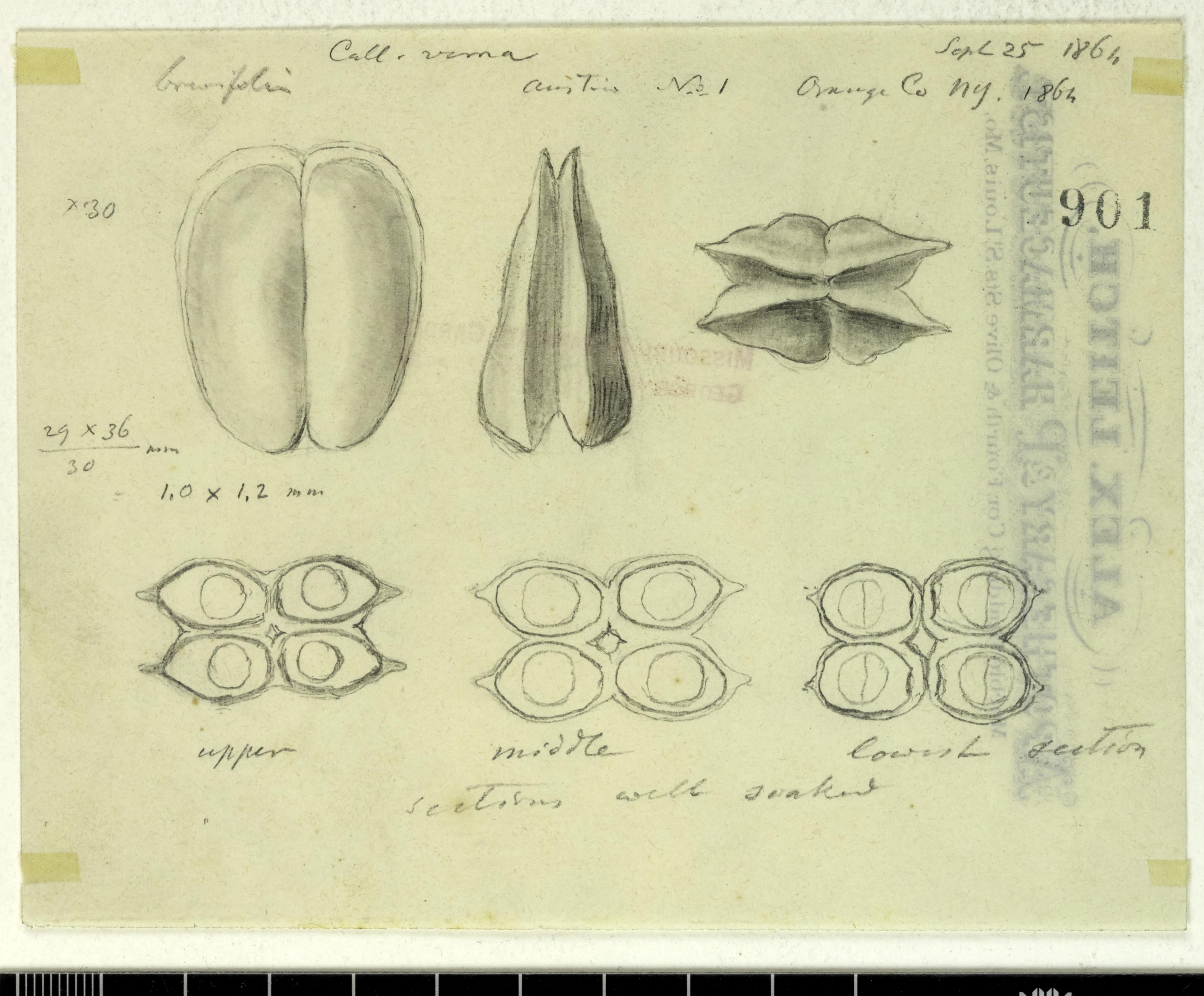


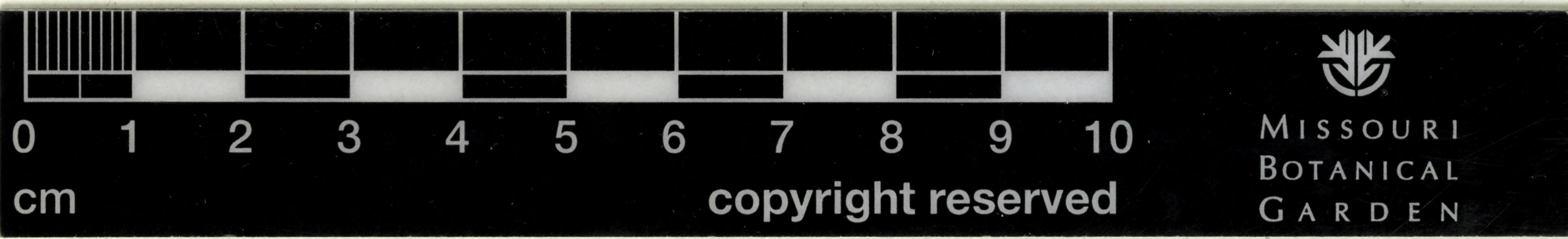


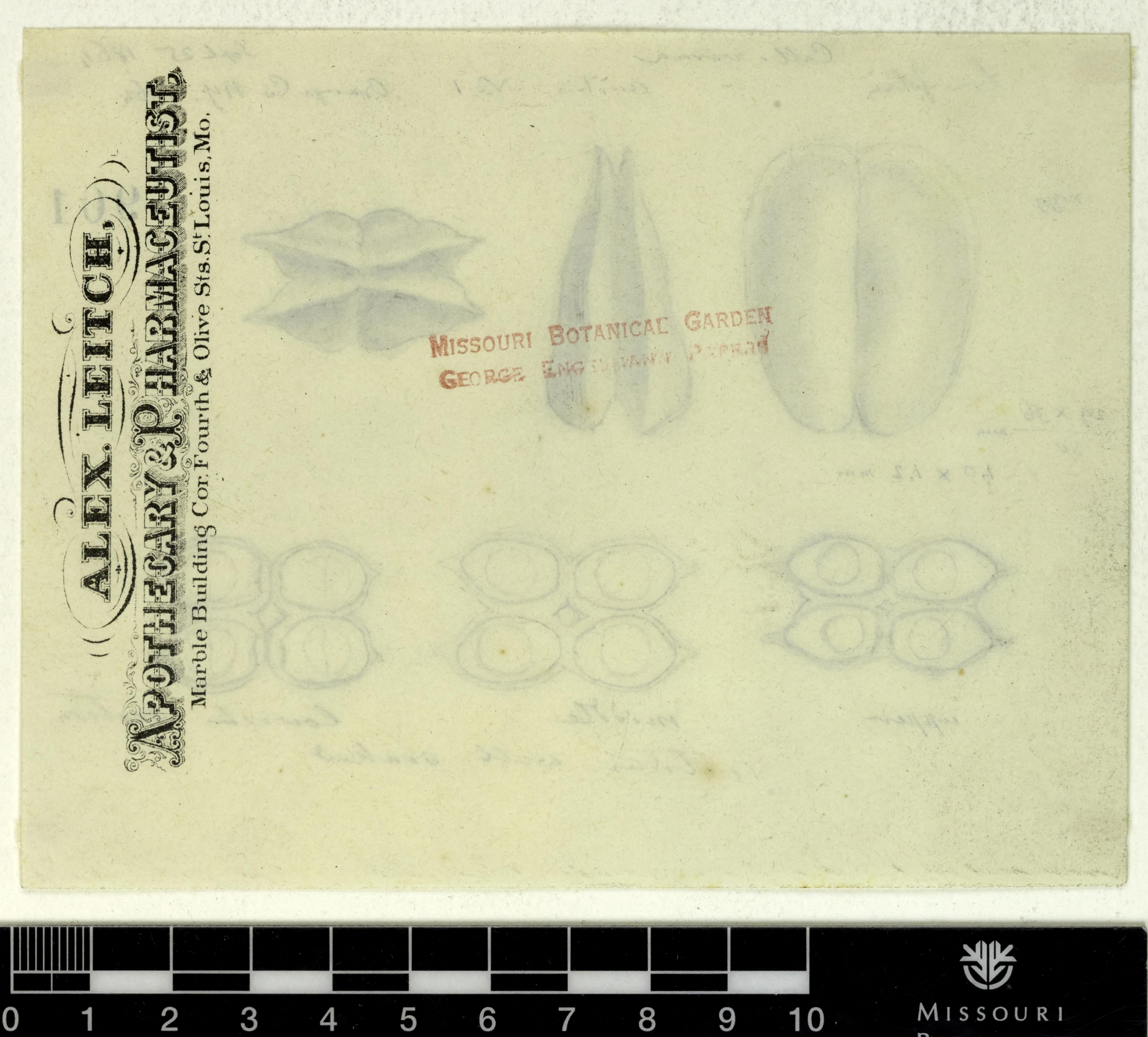


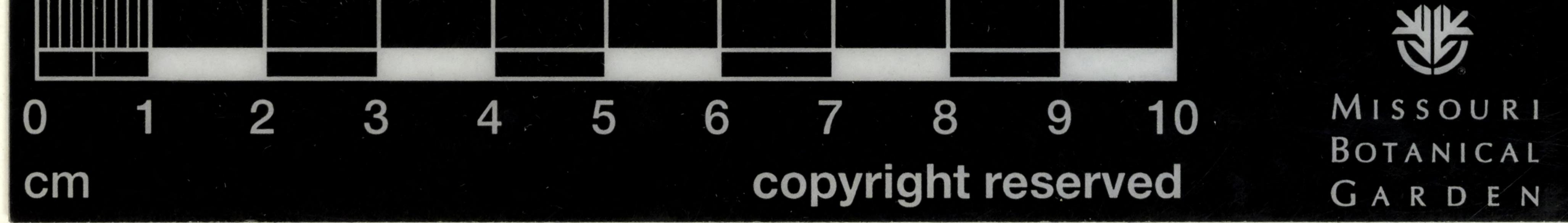


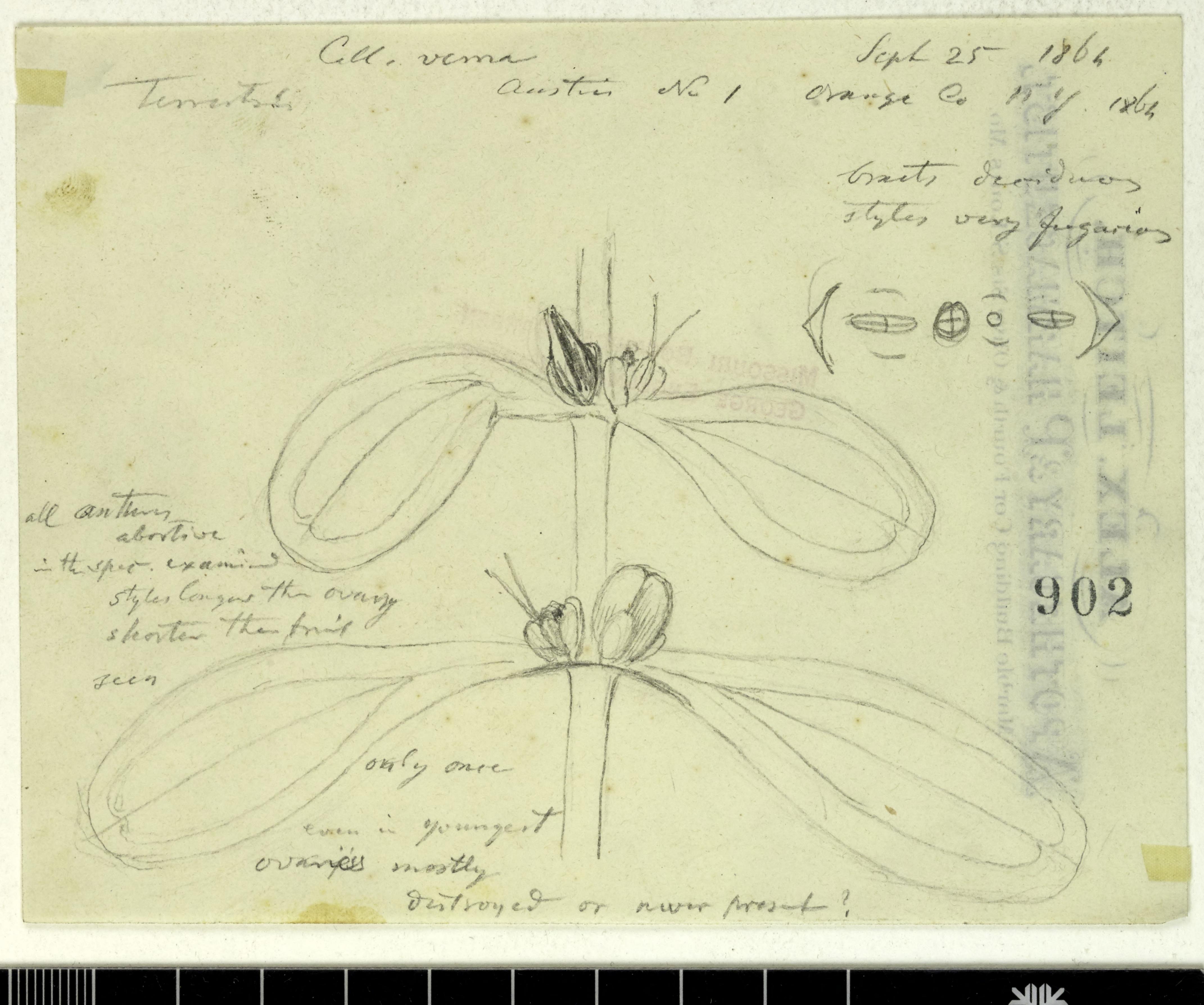


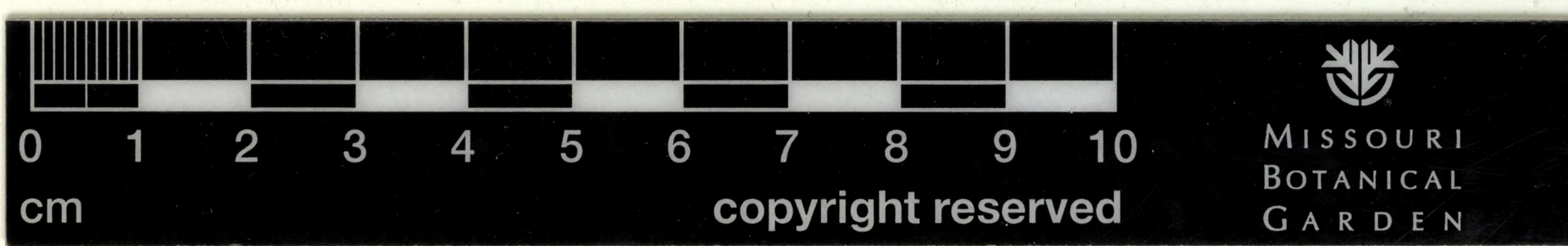


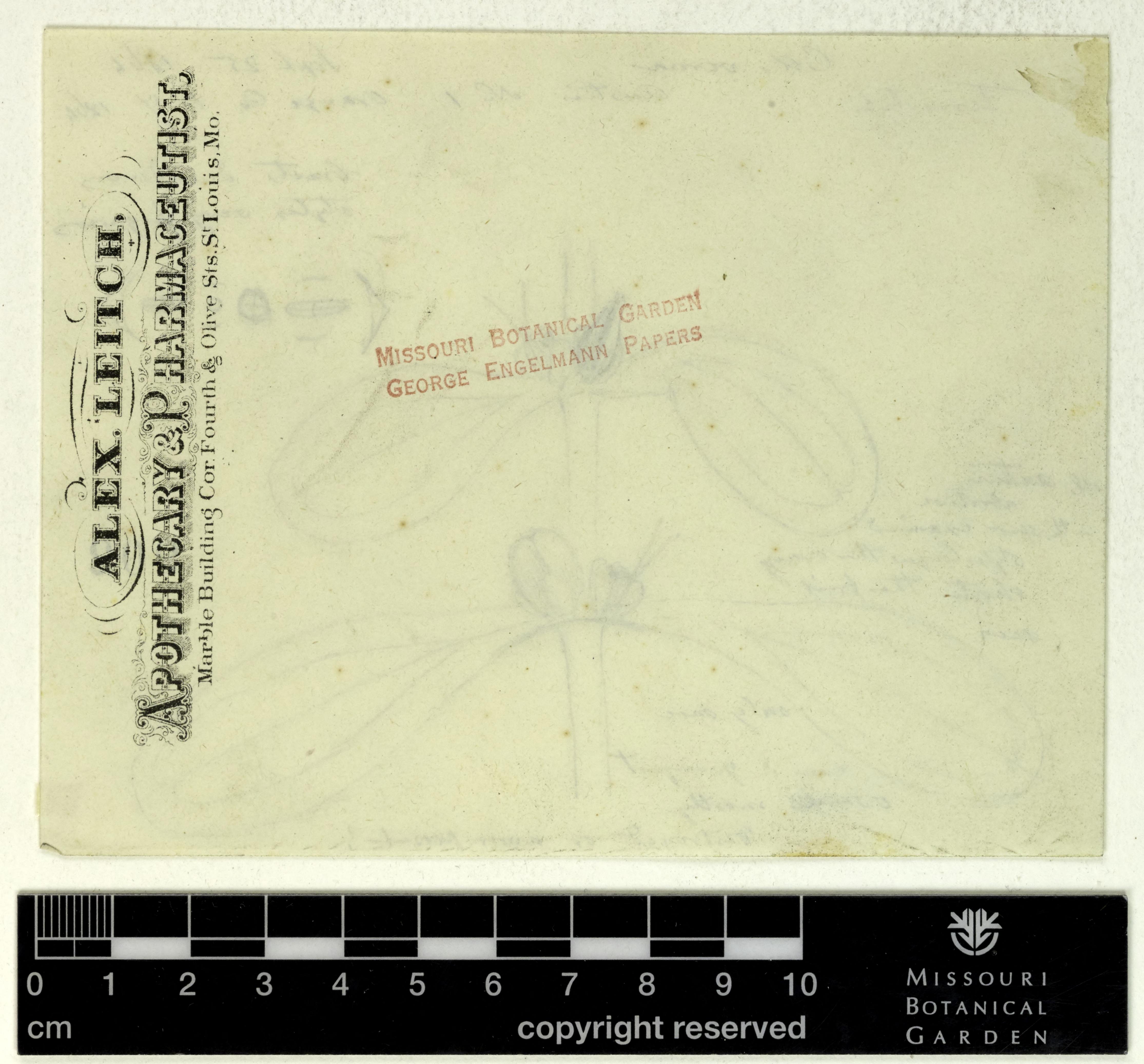


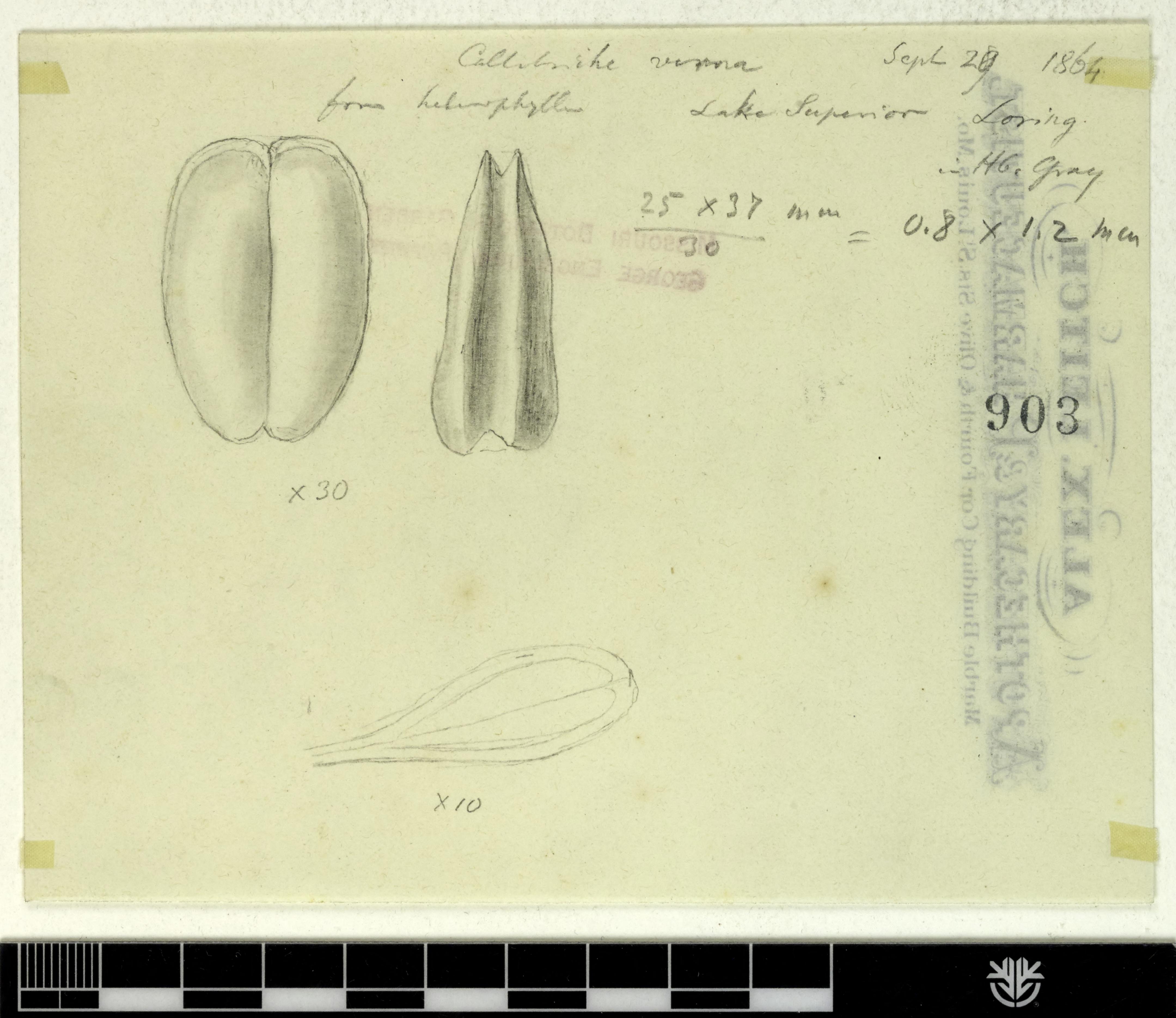




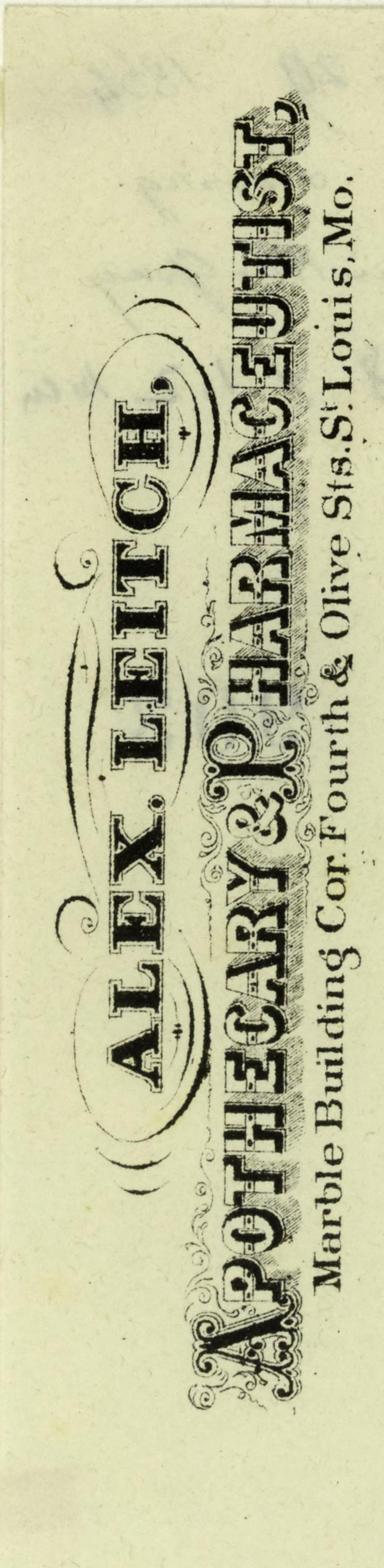


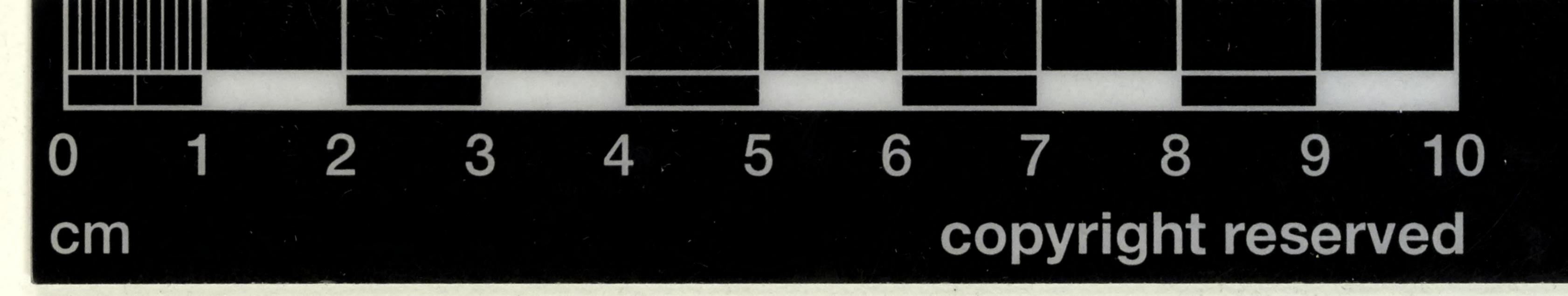


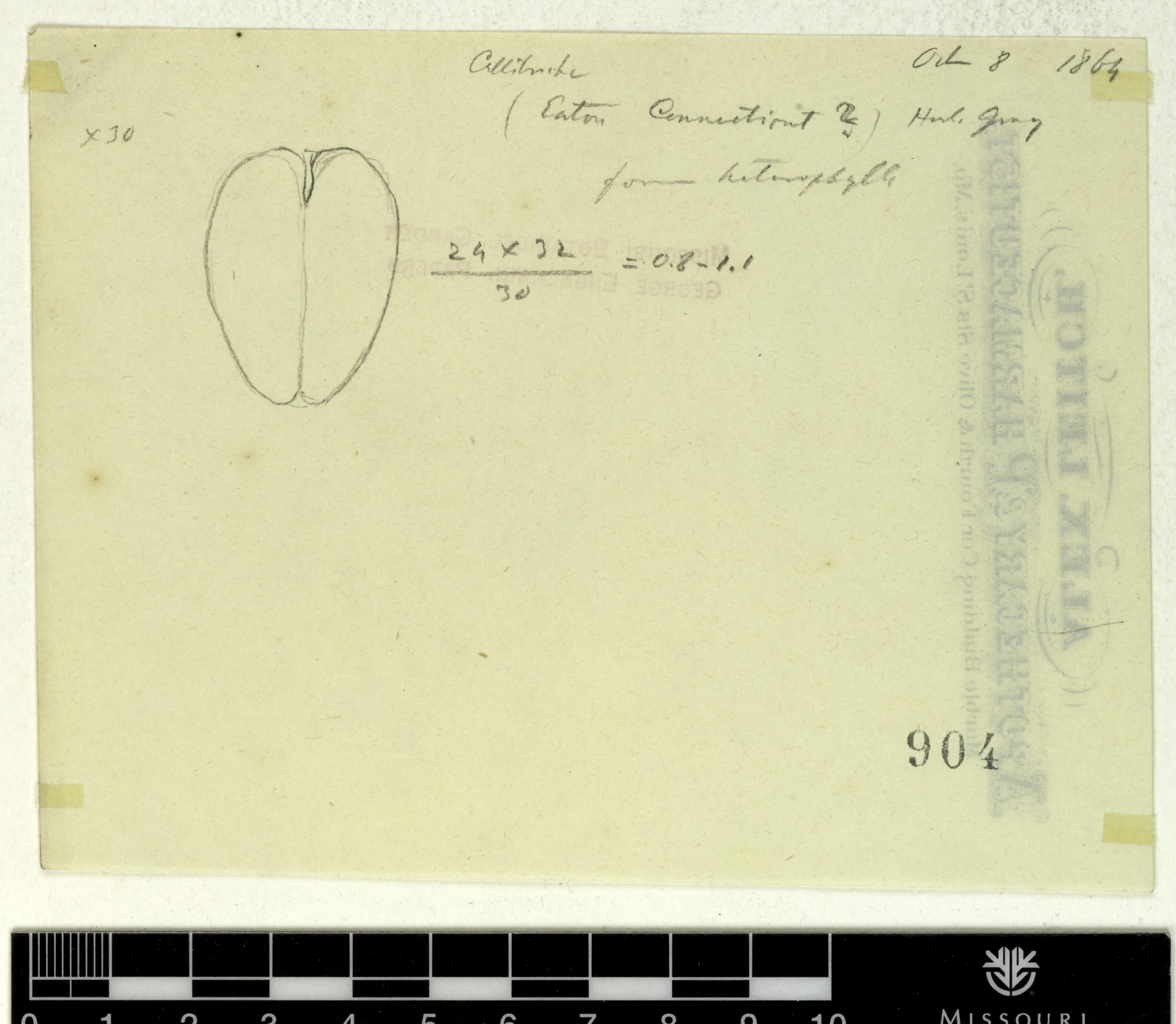






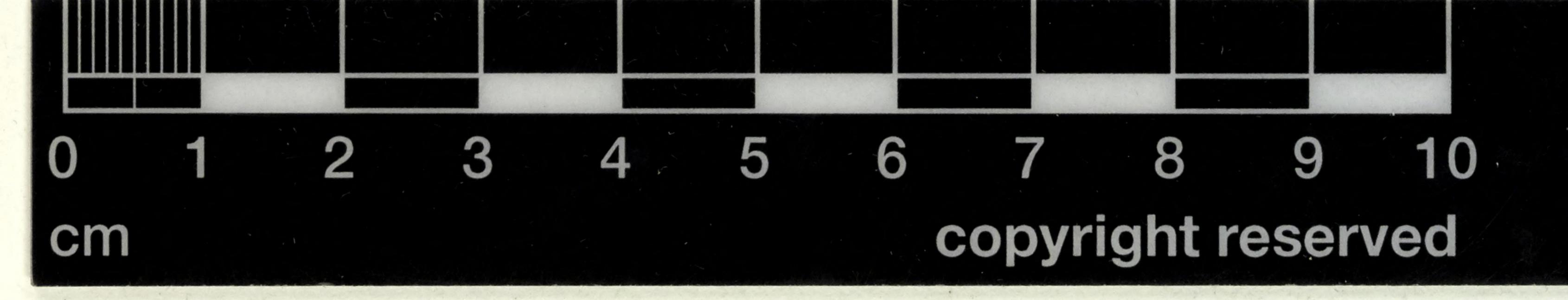


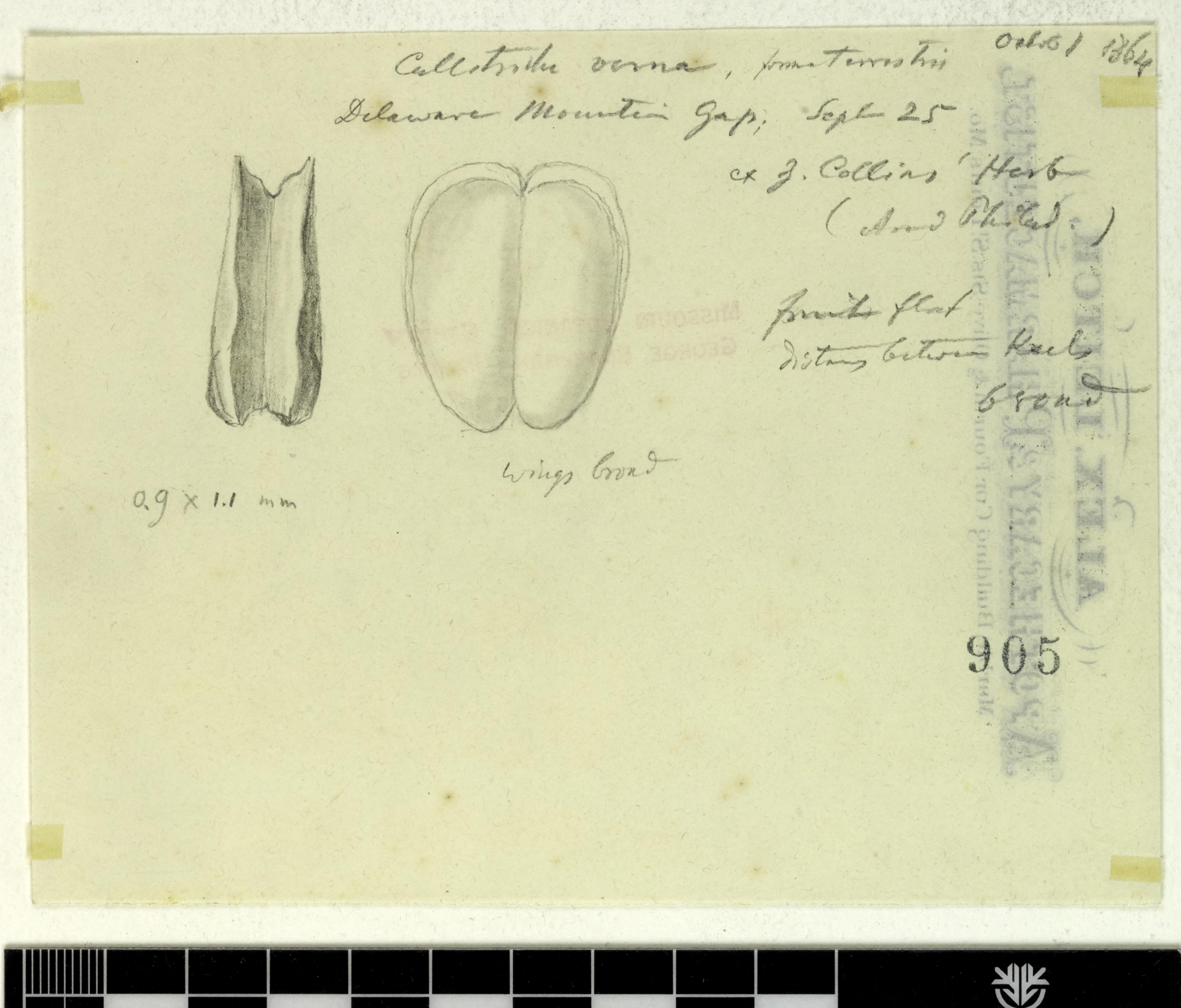




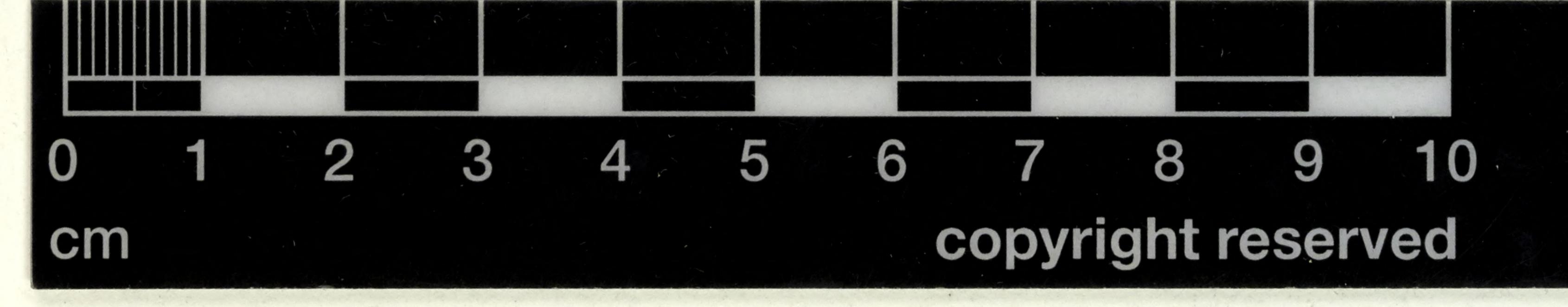
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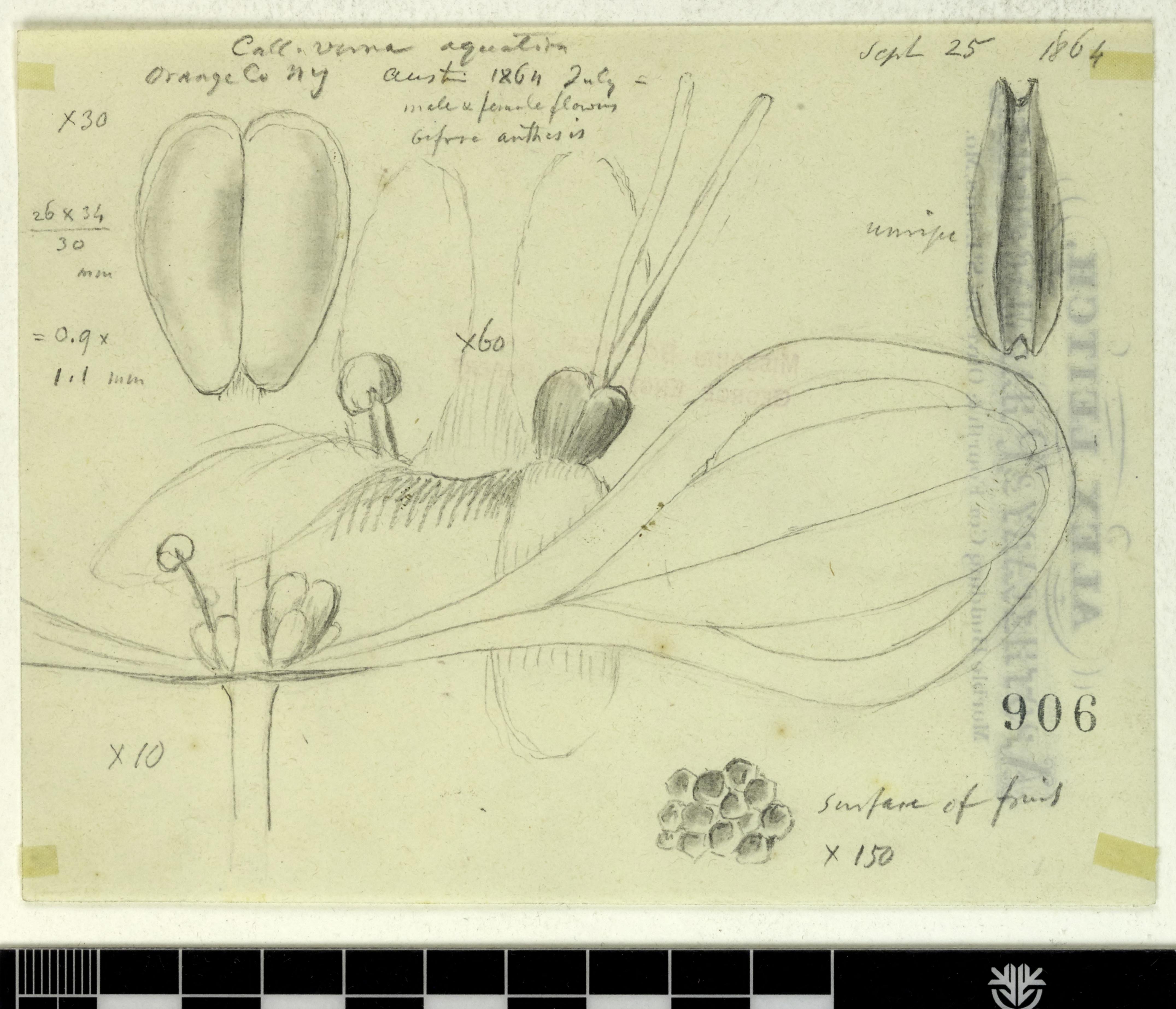
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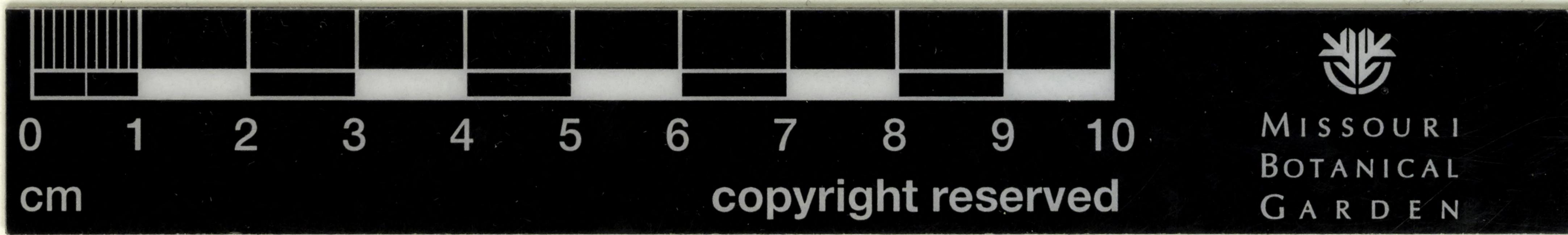


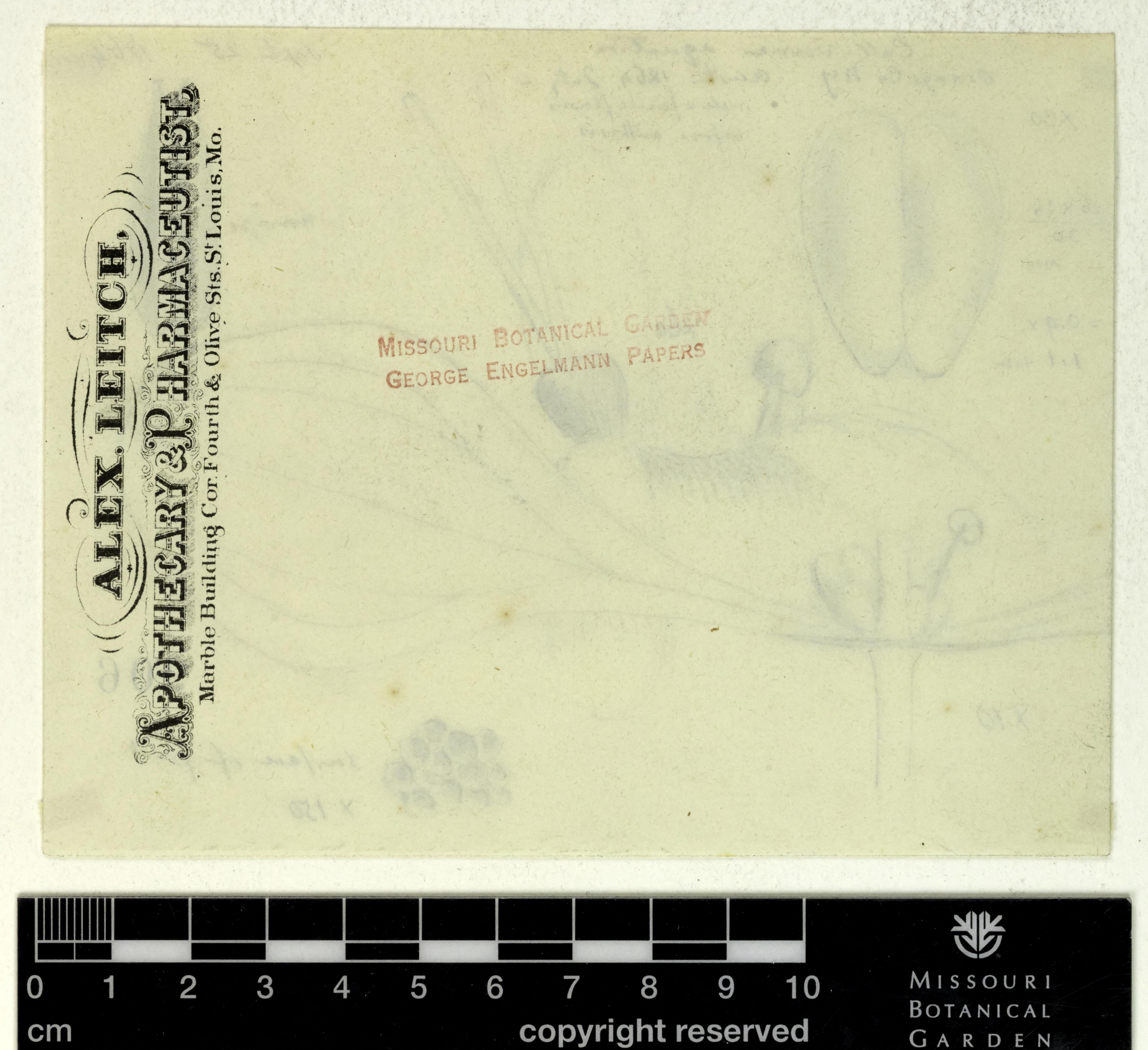




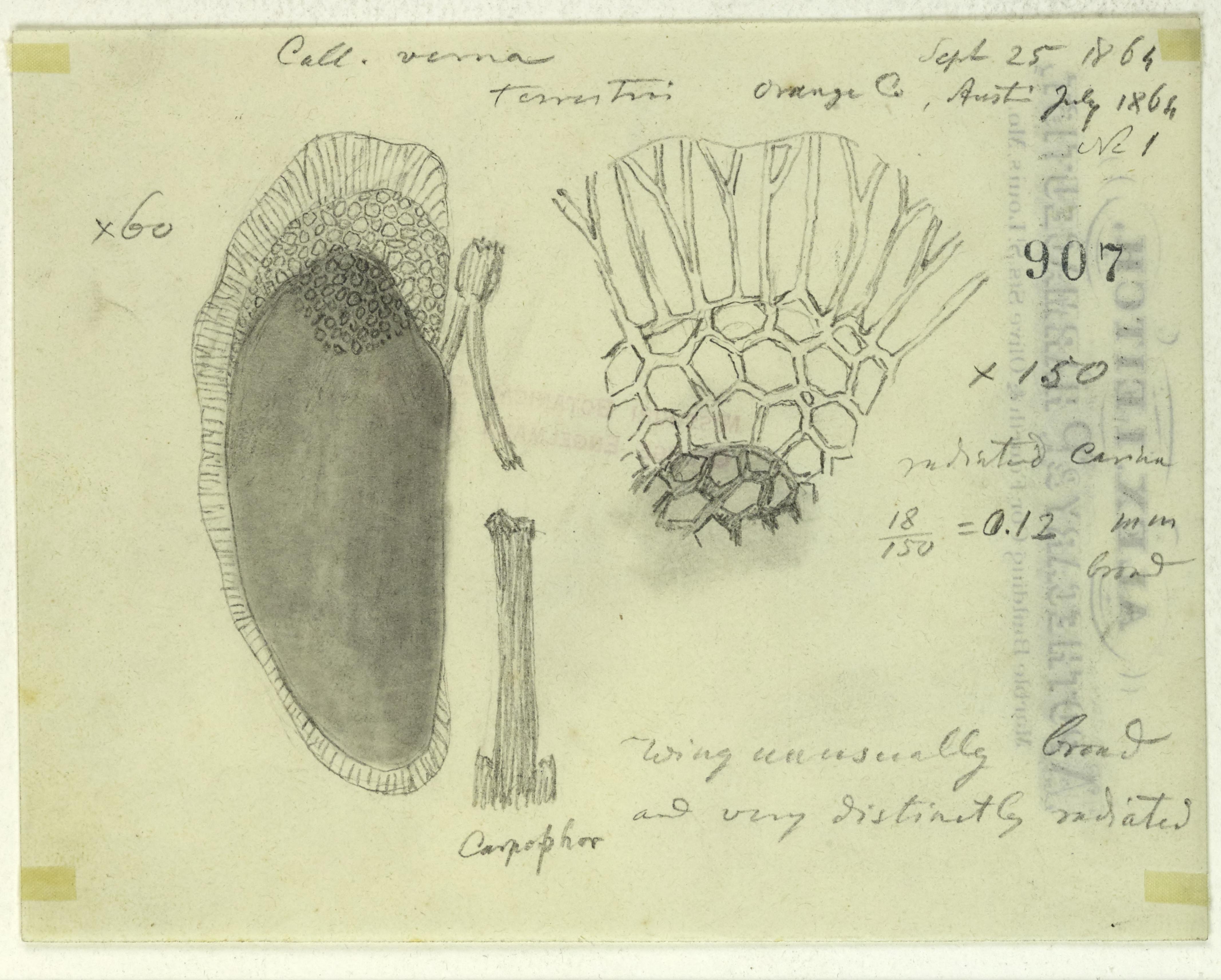


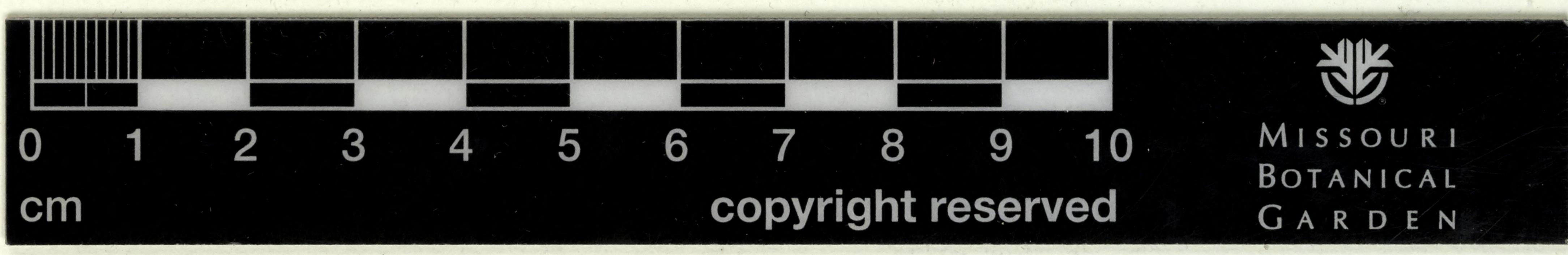




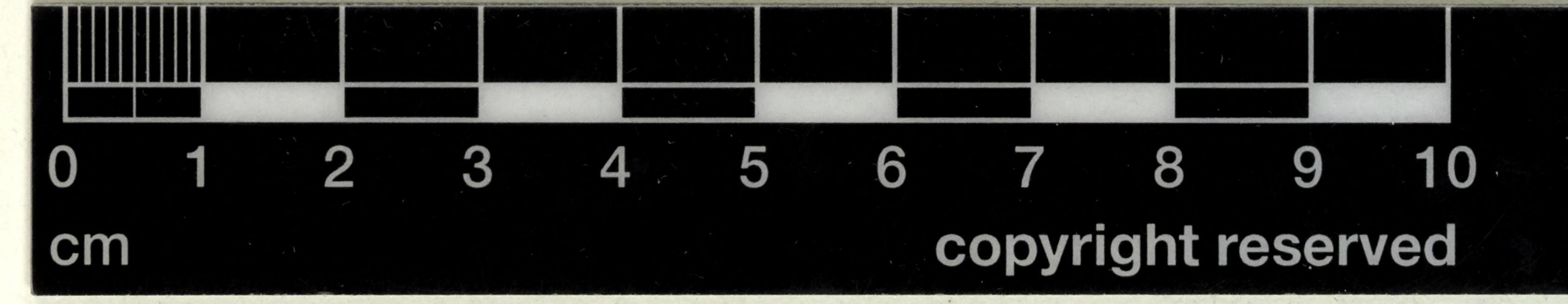


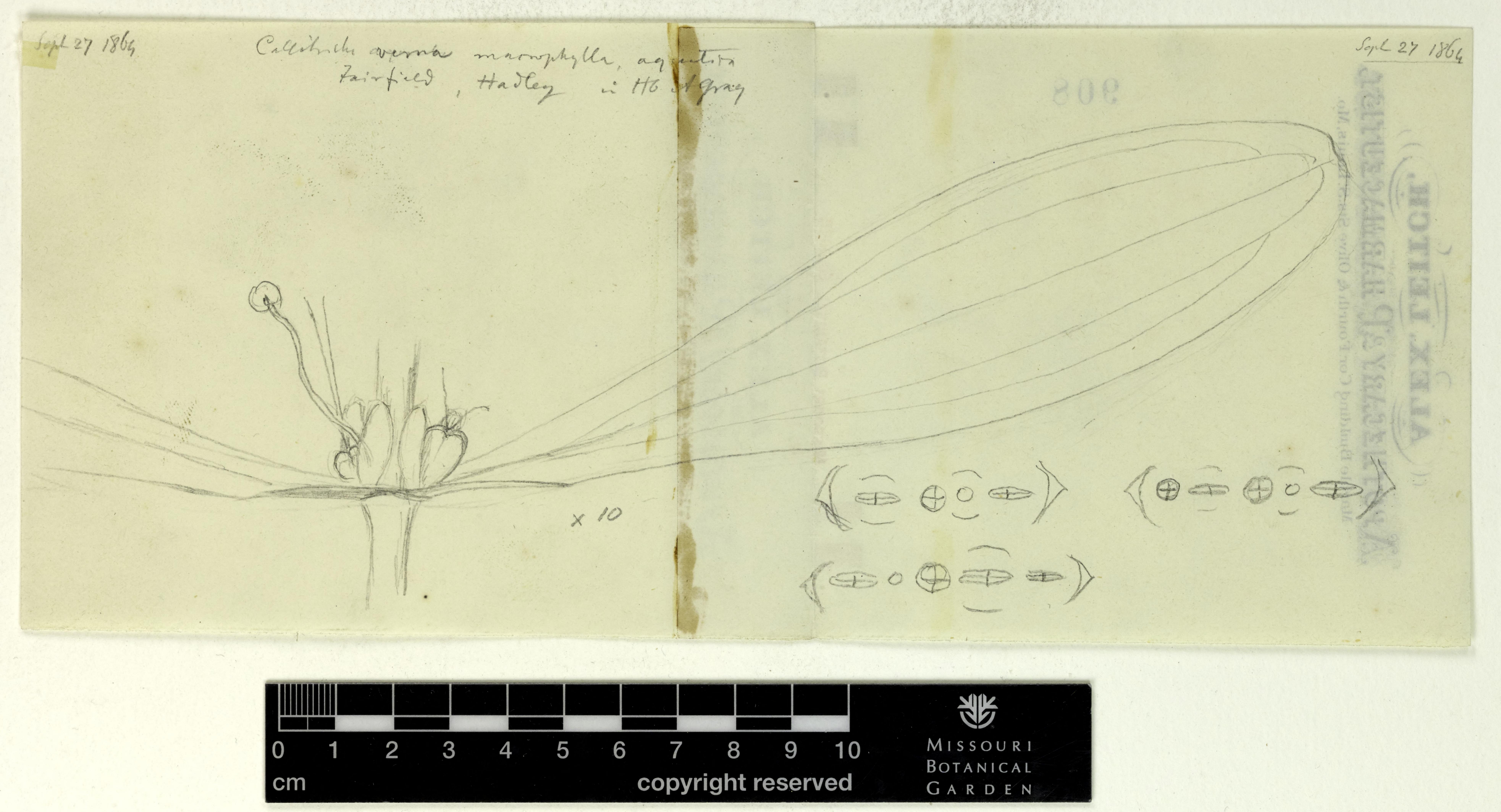
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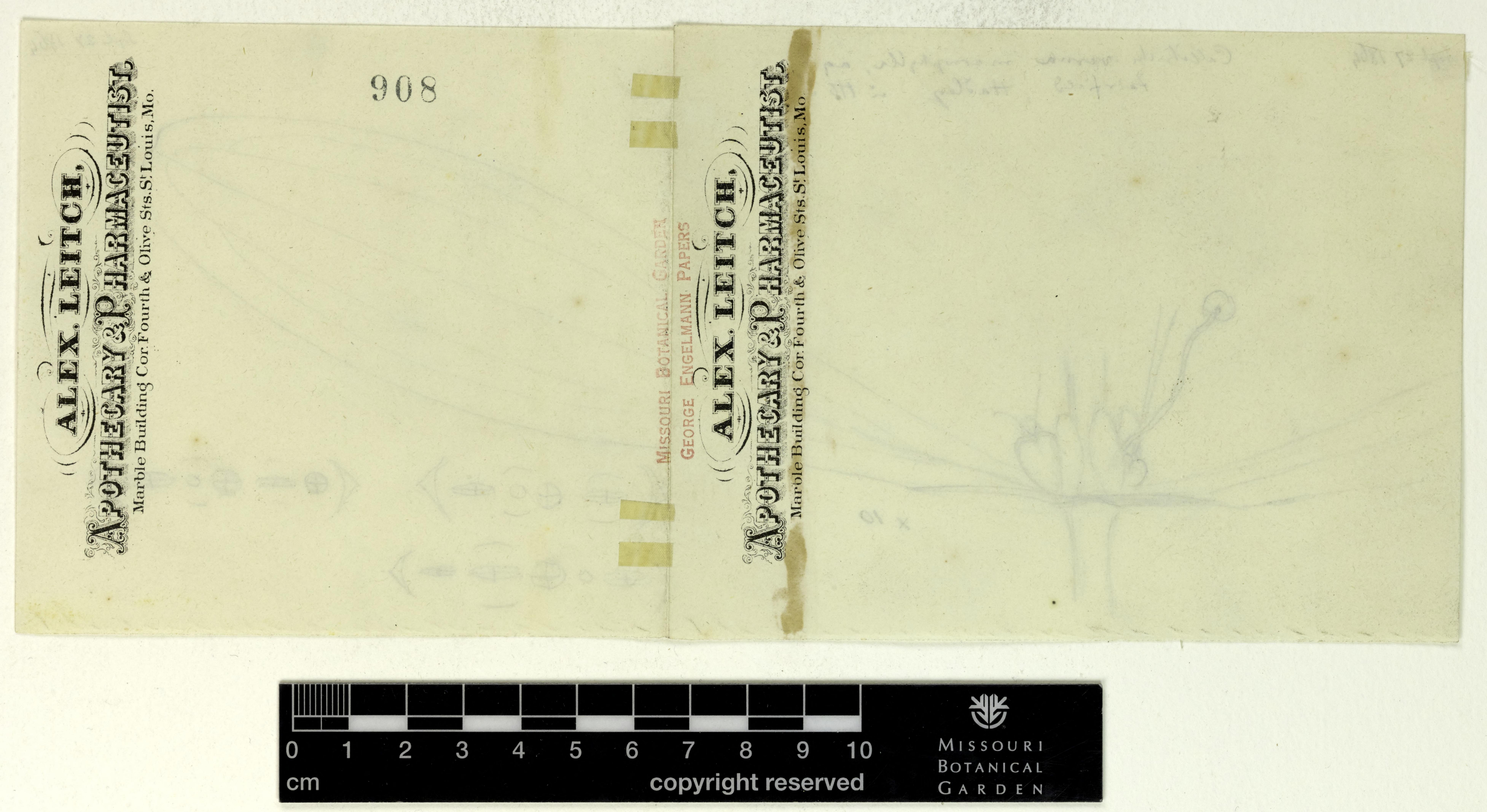


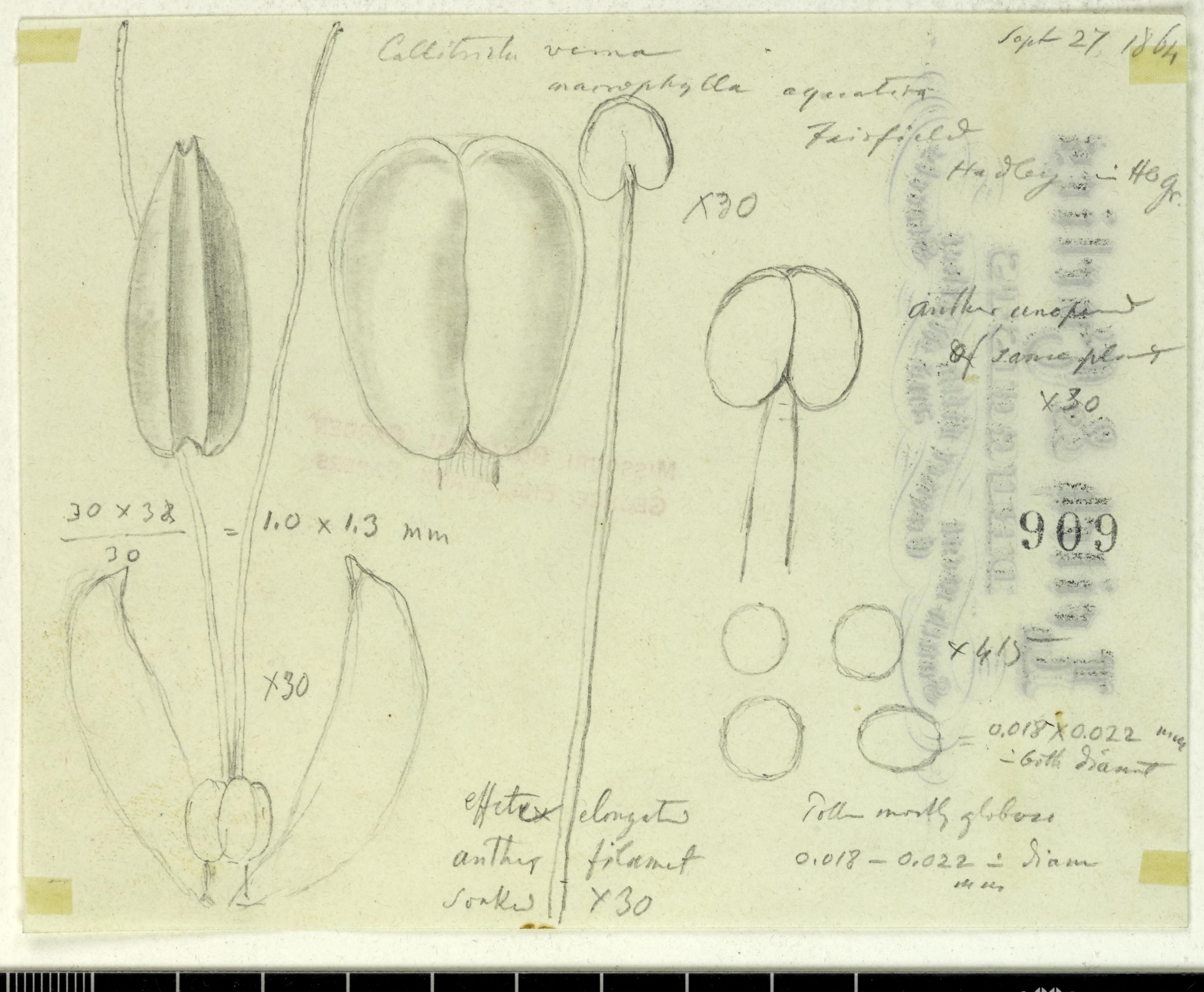


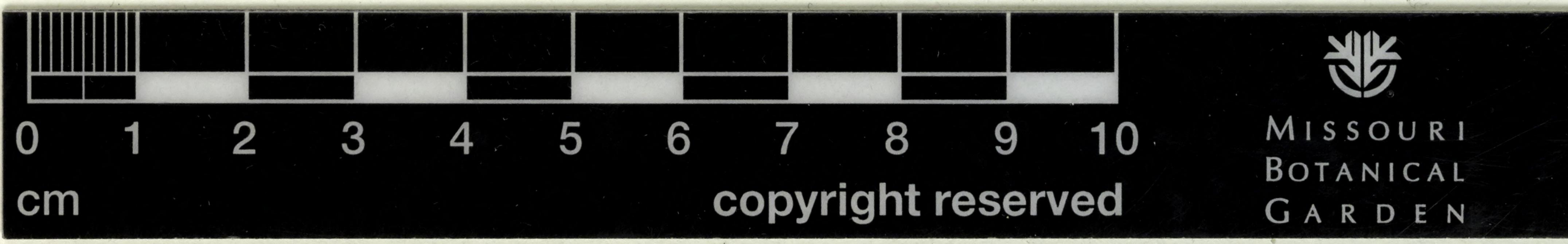
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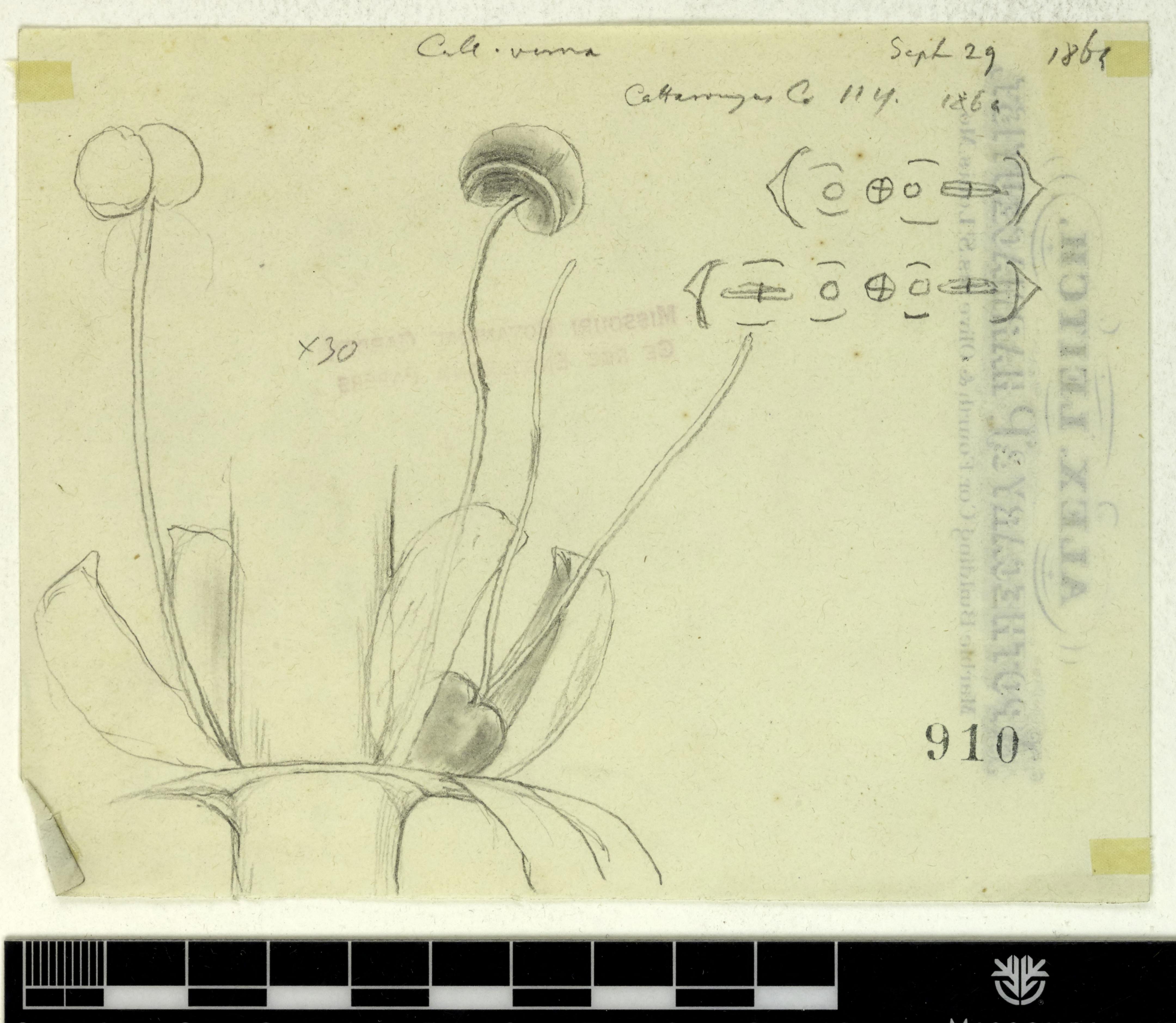




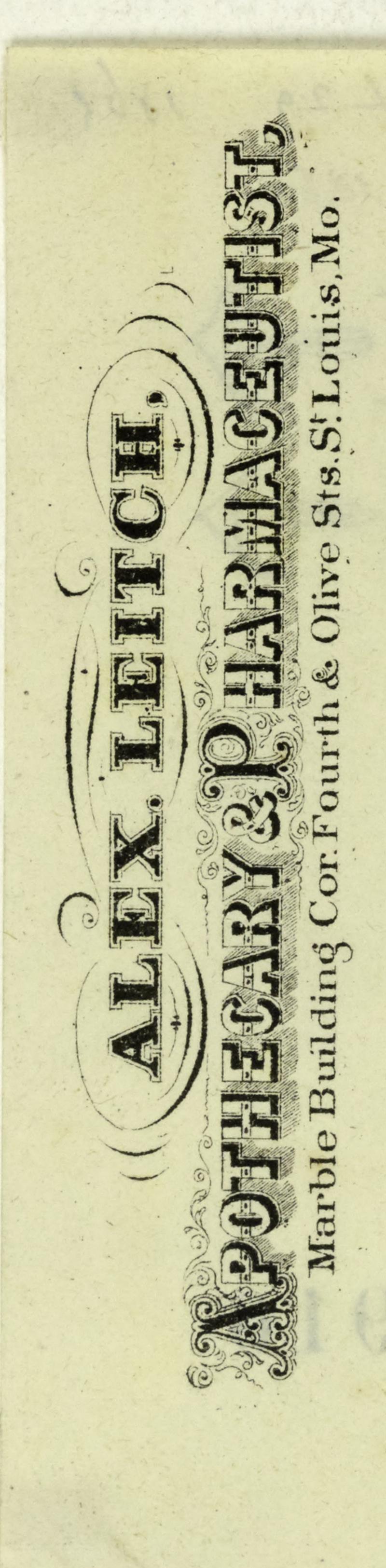


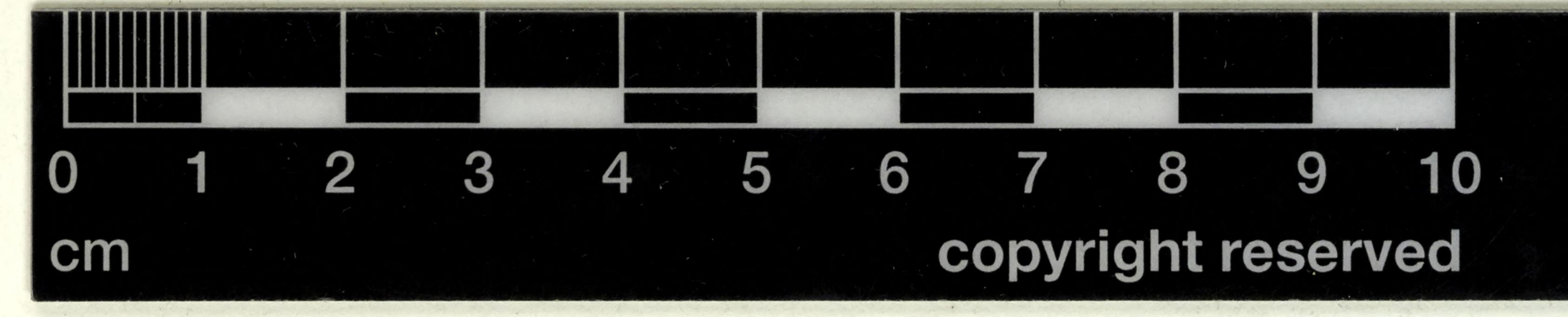


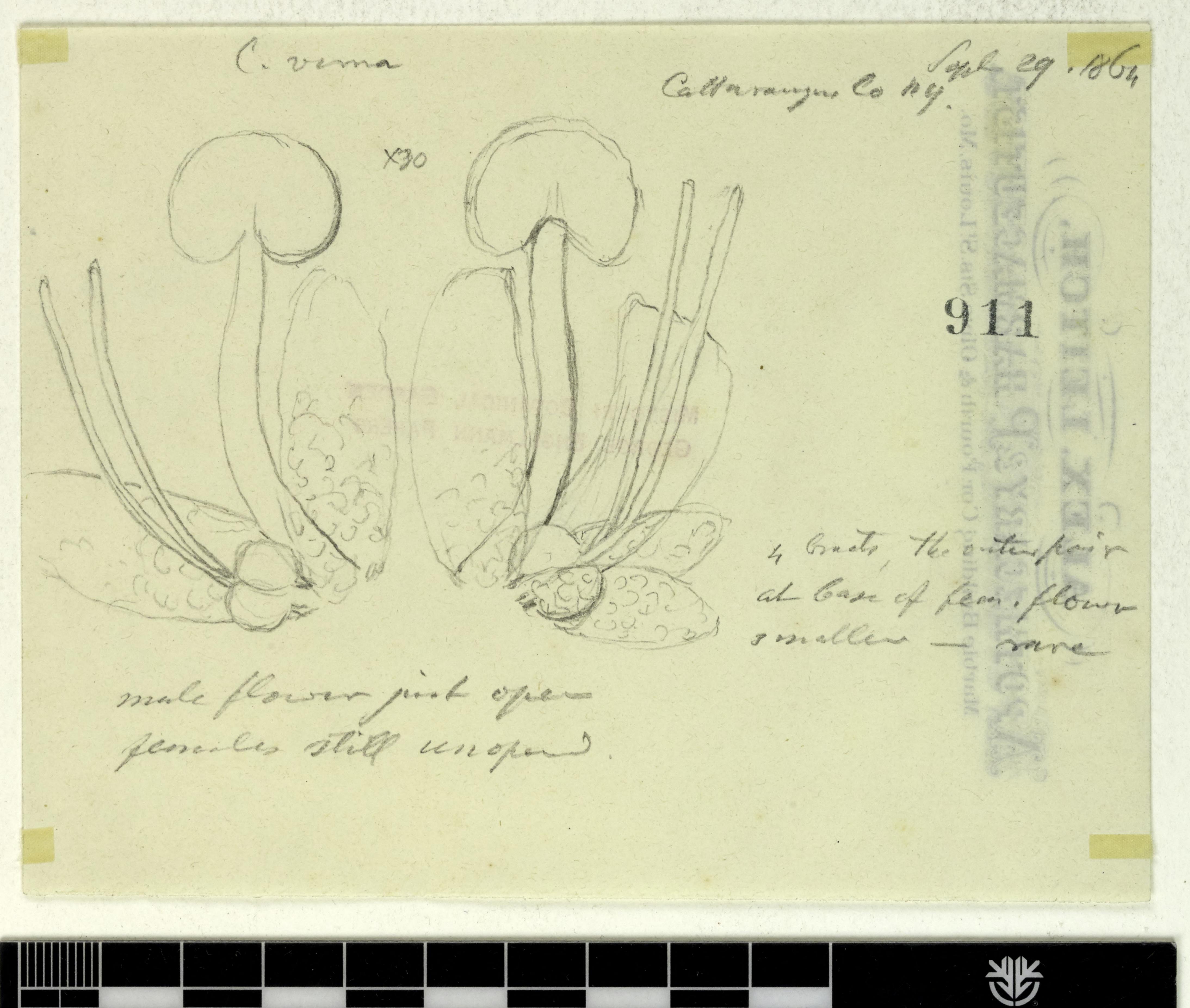


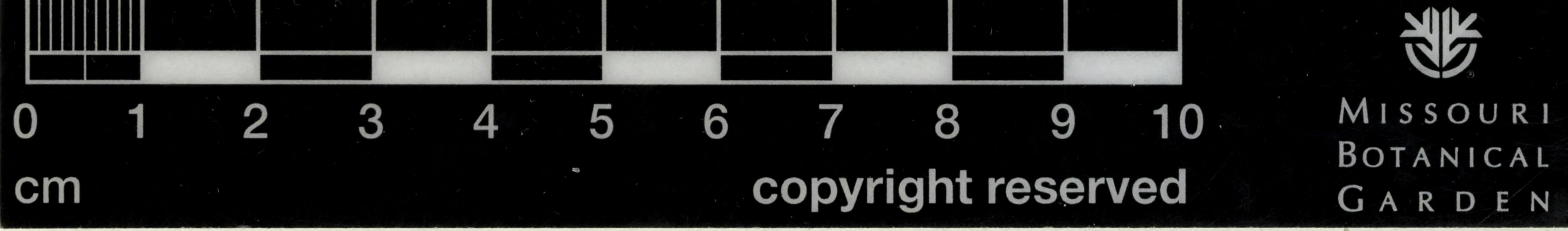


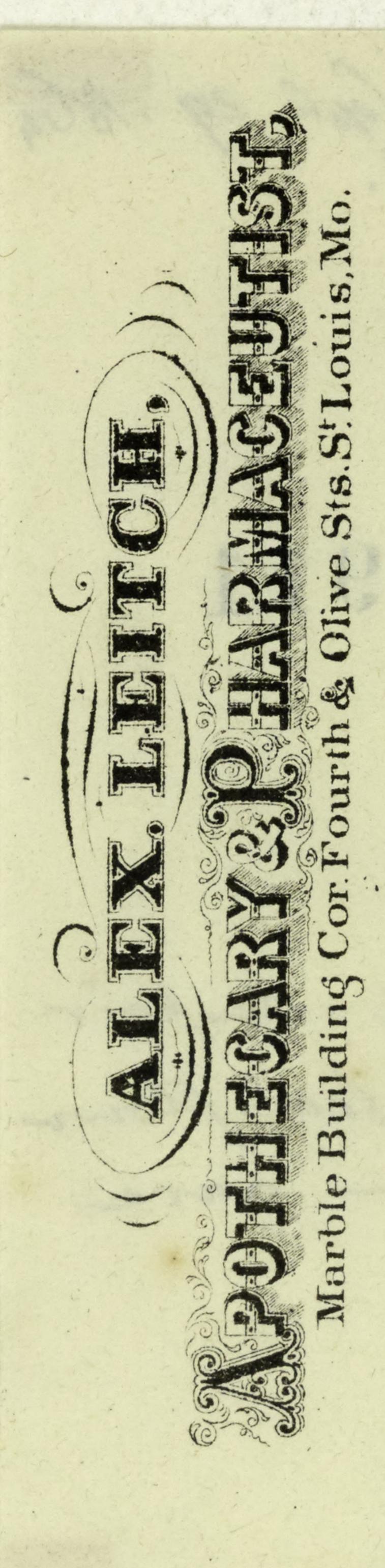


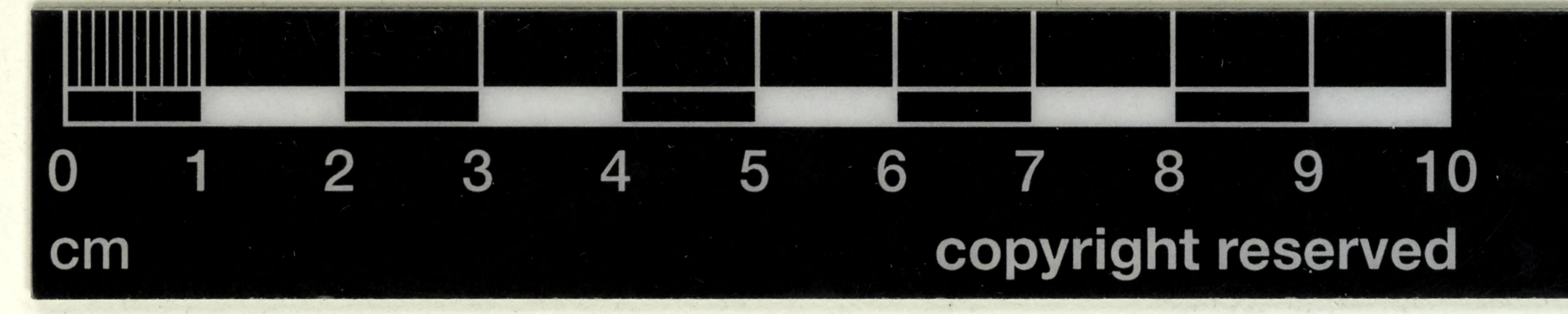


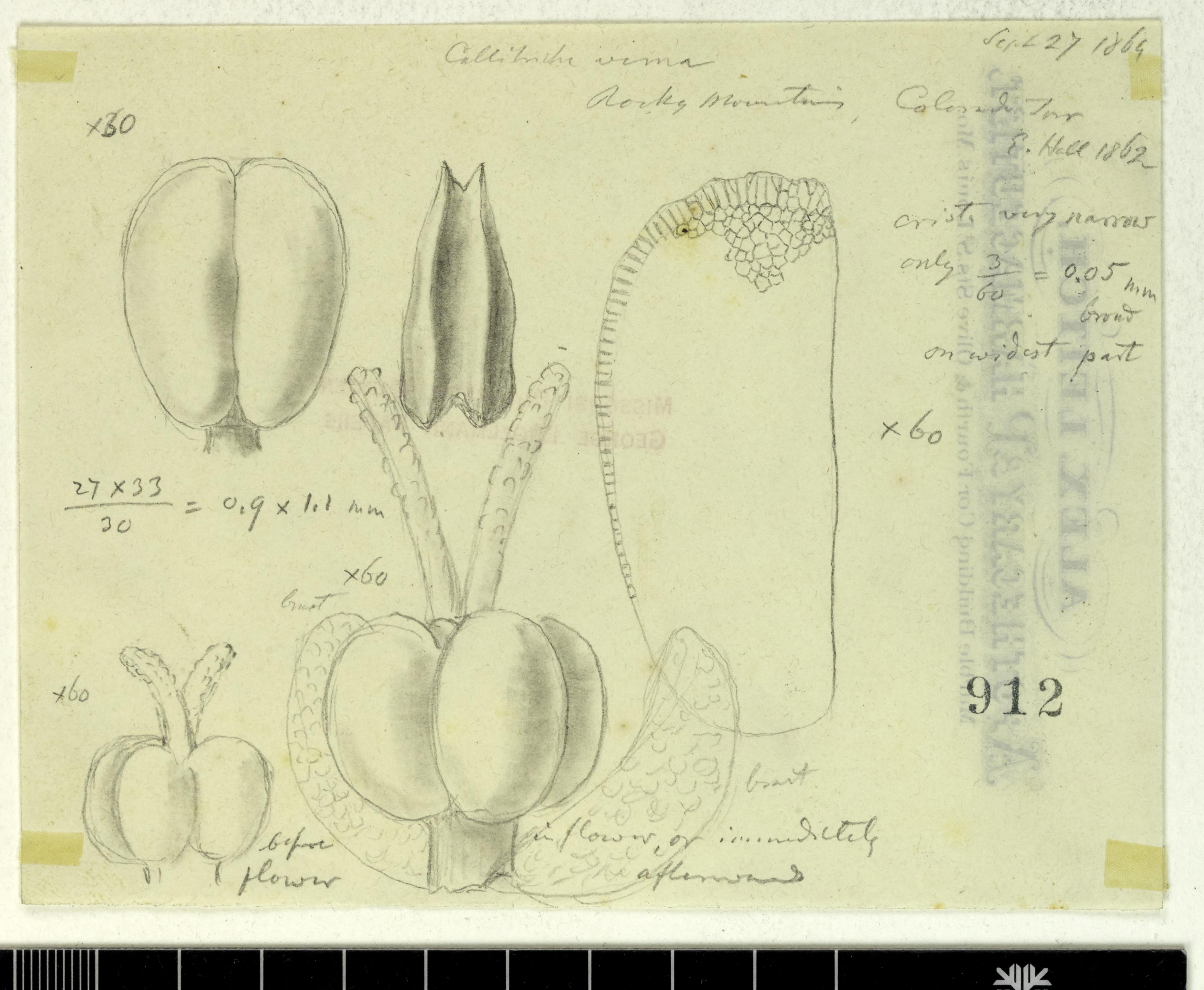


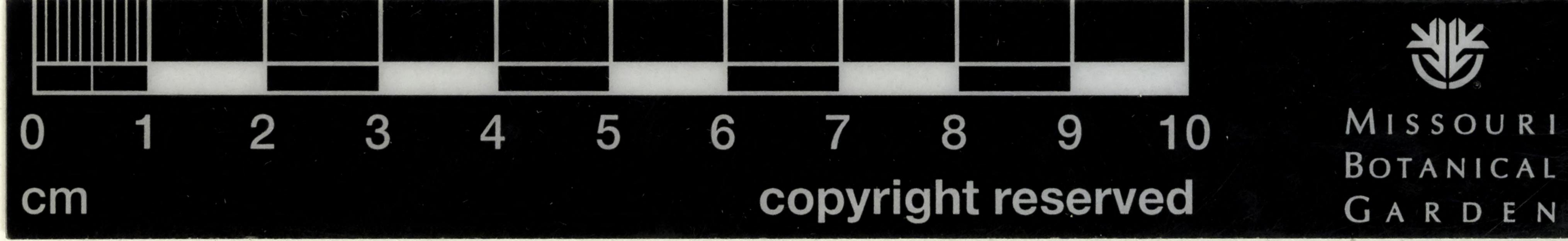












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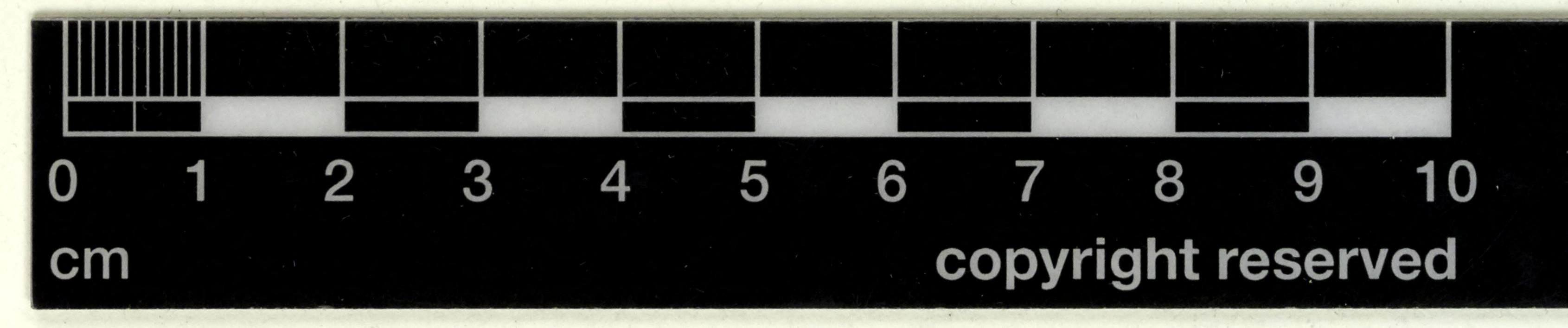
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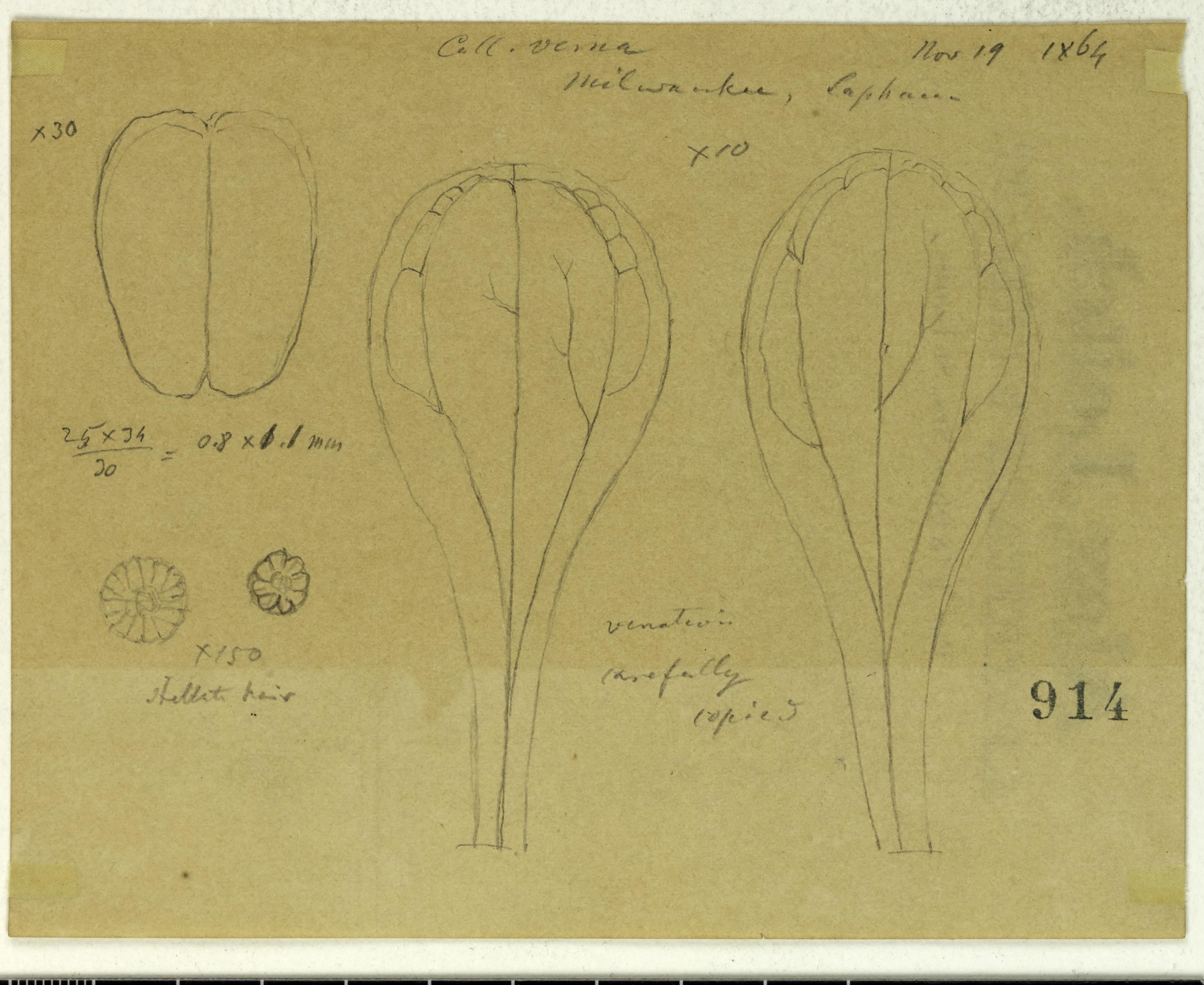
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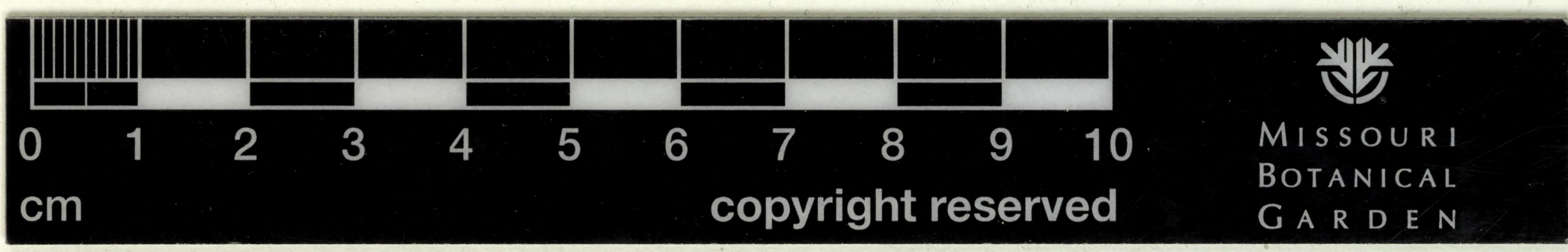


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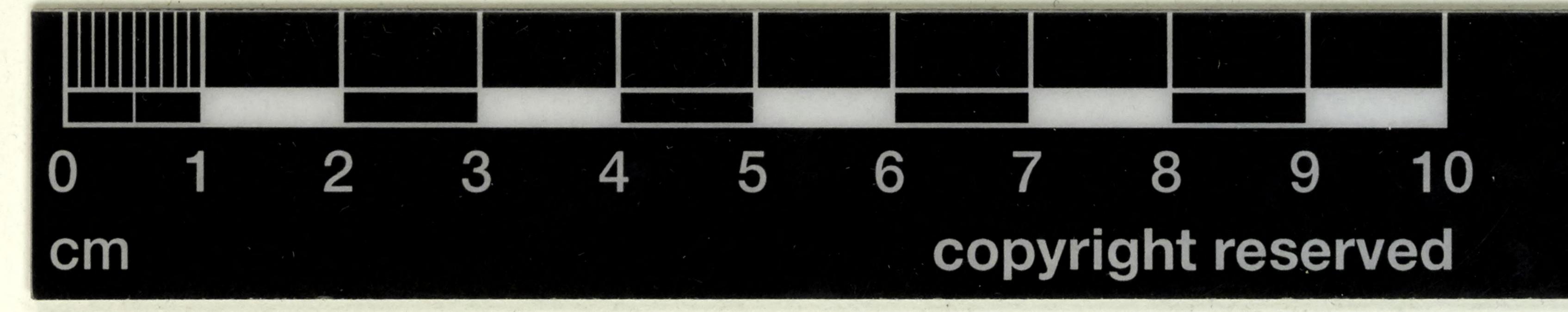
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## VI. The appearance of negative electricity was connected in

1861. No. times.	1862. No. times.	
30 23 20	32 28 4	with thunderstorms. with rains without thunder and lightning. with dry storms (without rain and without thunder and lightning).
4       1       78	3 67	with snow. with fog.

## VII. Relation of Rain and Snow to Electricity. Rain without thunderstorm was accompanied

	By Positi	ve Electri- ty.	By Negative Electricity.		By no Electricity.	
	In 1861.	In 1862.	In 1861.	In 1862.	In 1861.	In 1862.
January February March						
			1	4 4 30 30 8 2 3 3		
April	10	7	1	1	2	1
July	4		<b>原作与用地区的基础</b>	2000年1月1日1日1日1日日		2
September October November	4			1	4	8
TIOICITION TOO.	1 4	0			上。中海中的人们也是	
December	50 + el.	36 + el.	${23-\text{el.}}$	28 — el.	15 no el.	$\frac{6}{34 \text{ no el.}}$

## Snowing was accompanied

	By Positi ci	ve Electri- ty.	By Negative Electricity.		By no Electricity.	
	In 1861.	In 1862.	In 1861.	In 1862.	In 1861.	In 1862.
January February March	Contraction of the last of the	Delining and Association and A				
TITTELL OFF	0	14				
November		4		•••••	1.00	• • • • • • • • • • • • • • • • • • • •
			4	•••••		1
	23 + el.	36 + el.	2— el.	3 — el.	~	1 no el.

## REMARKS.

The monthly mean of atmospheric electricity in 1862 was not quite so regular as that in 1861. While in 1861 an un-

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interrupted descent and ascent took place from January to December, we find in 1862 some interruptions in the steps of that ladder. The electricity in February, 1862, is about four degrees higher than that of January, April somewhat higher than March, and July is the lowest instead of September in 1861. These trifling irregularities may be accounted for by differences in temperature and relative humidity, and by a greater number of thunderstorms in 1862. January of 1862, for instance, was so unusually rainy, that its relative humidity too was unusually high, diminishing thus electricity. But the general features of distribution of electricity throughout the year are apparent in both years, and we may in that respect divide the twelve months of each year into two or three groups. Computing the months which give the highest electricity and those which give the lowest in each year, we find that in both years the months of January, February, March, April, November and December exhibit the highest, and the months of May, June, July, August, September and October the lowest electricity. The first group gives

The aggregate monthly mean of 71.5 degrees of electricity in 1861 " 1862 and 74.6 " 1861 While the second group gives 29.0 " 1862 and 25.7

The second group prevailed therefore in 1861, and the 1st in 1862.

Or we may divide the twelve months of each year into three groups. The first group with the highest electricity is formed by the months of January, February, November and December; the second with a mean electricity by the months of March, April, May and October; and the third with the lowest electricity by the months of June, July, August and September.

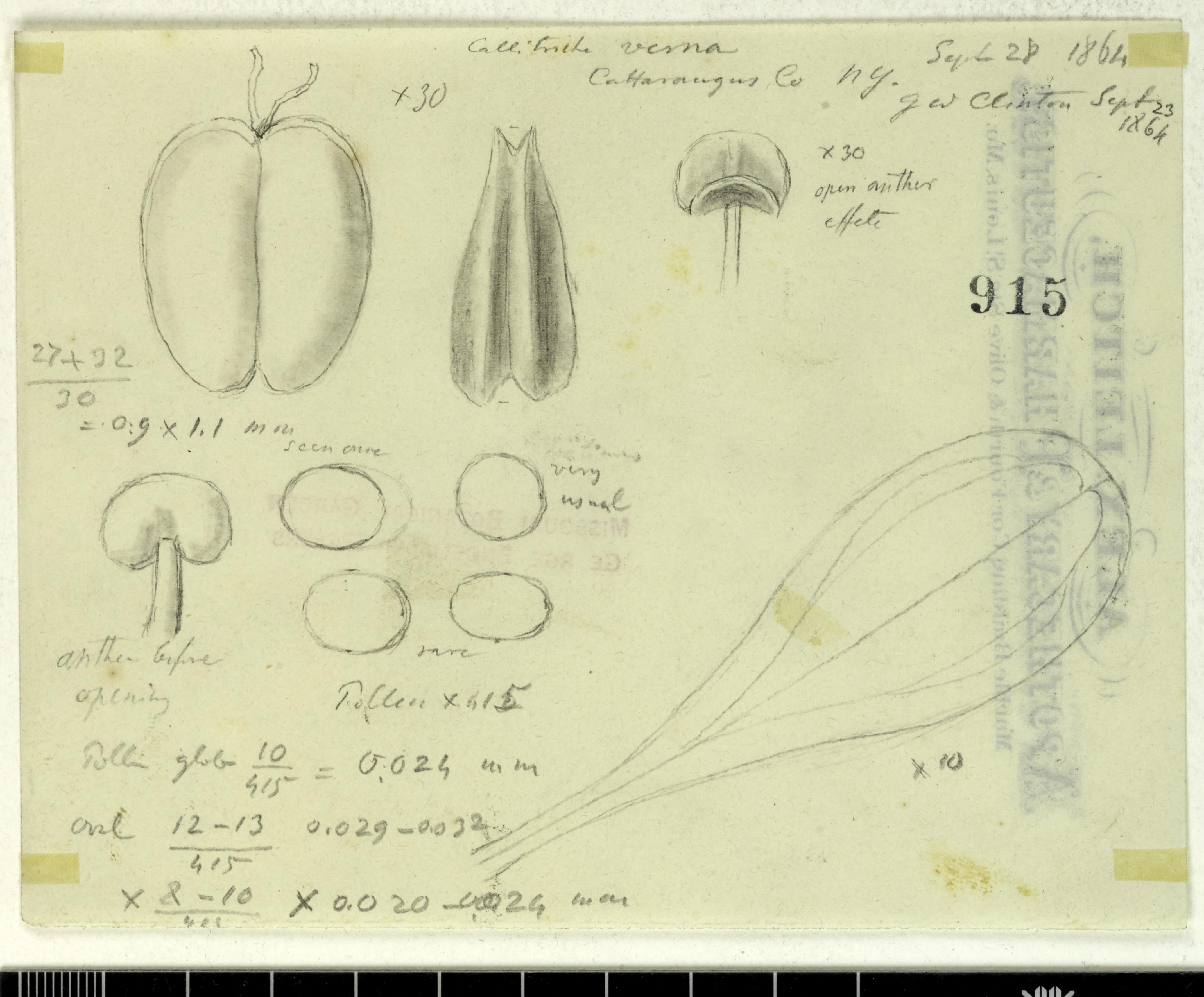
The aggregate monthly mean of

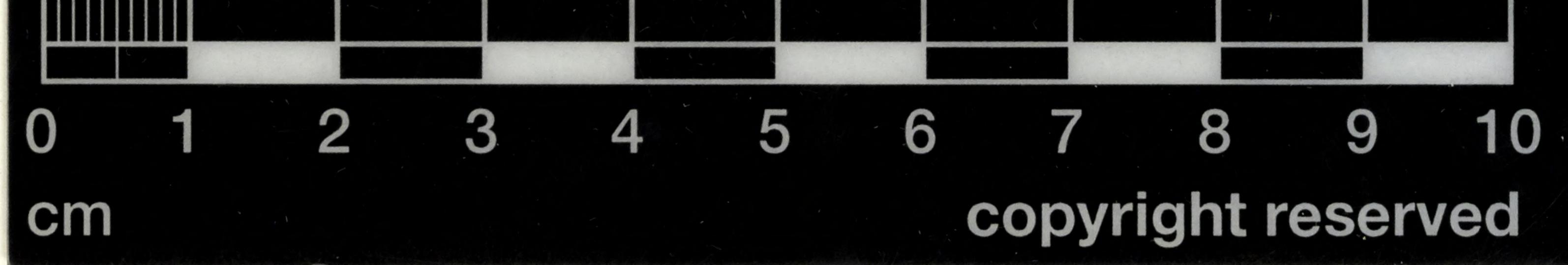
The first group in 1861 is 52.9—in 1862, 54.6 The second " 33.5 The third " "

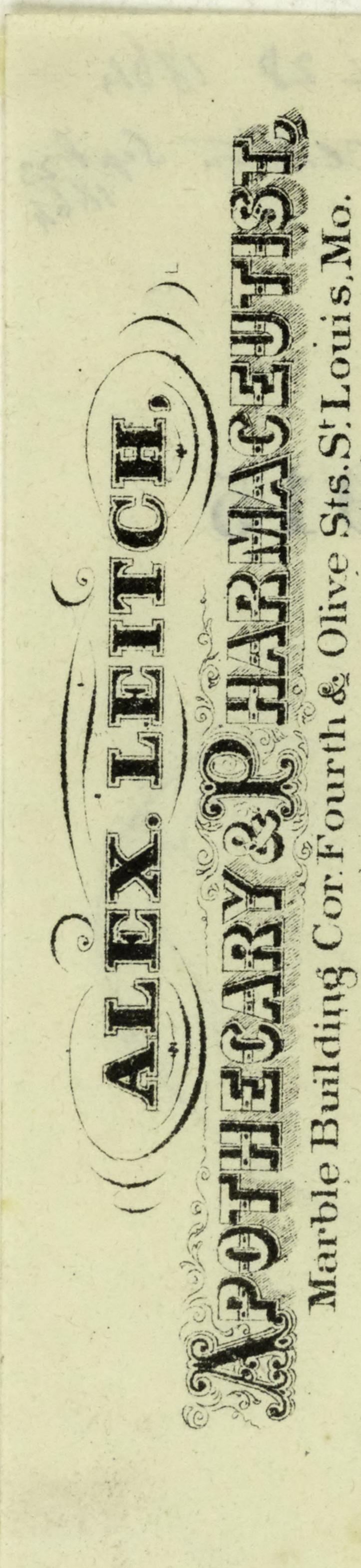
Thus in 1861 the third group prevailed, and in 1862 the first and second. But these differences are so well balanced throughout the year, that the mean of the whole year in 1861 and in 1862 is exactly the same, namely, 8.4. Such an identity in the yearly result, even to decimals, is of course not to be expected every year; but it seems to prove, at least, that the yearly mean of electricity is as constant as that of temperature, of relative humidity, and of atmospheric pressure.

The third table, showing the daily periodicity of atmospheric electricity, confirms the daily two maxima and two

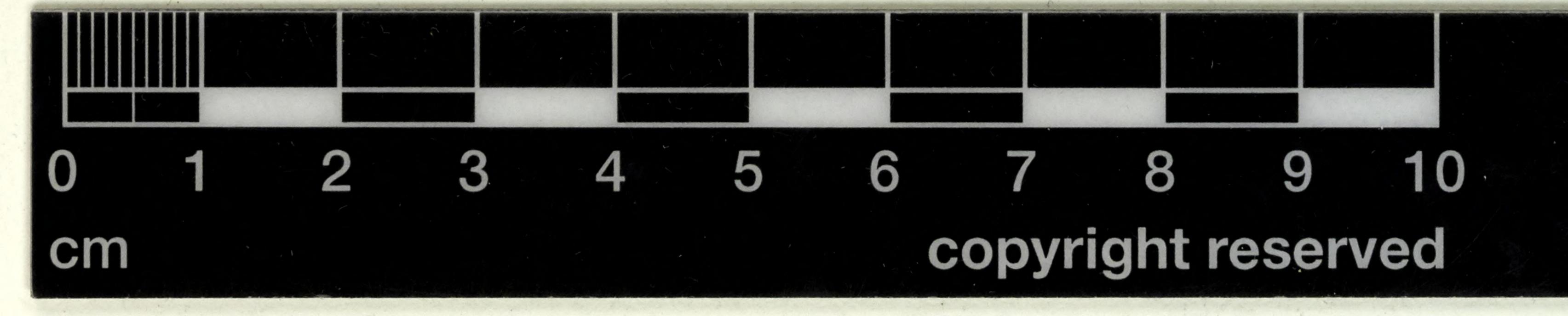
minima of electricity as an undeniable fact.

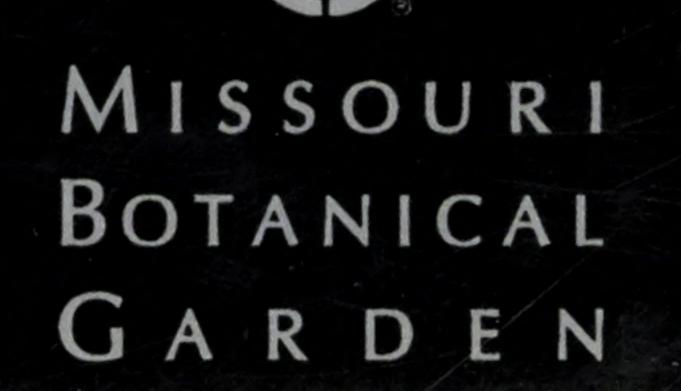


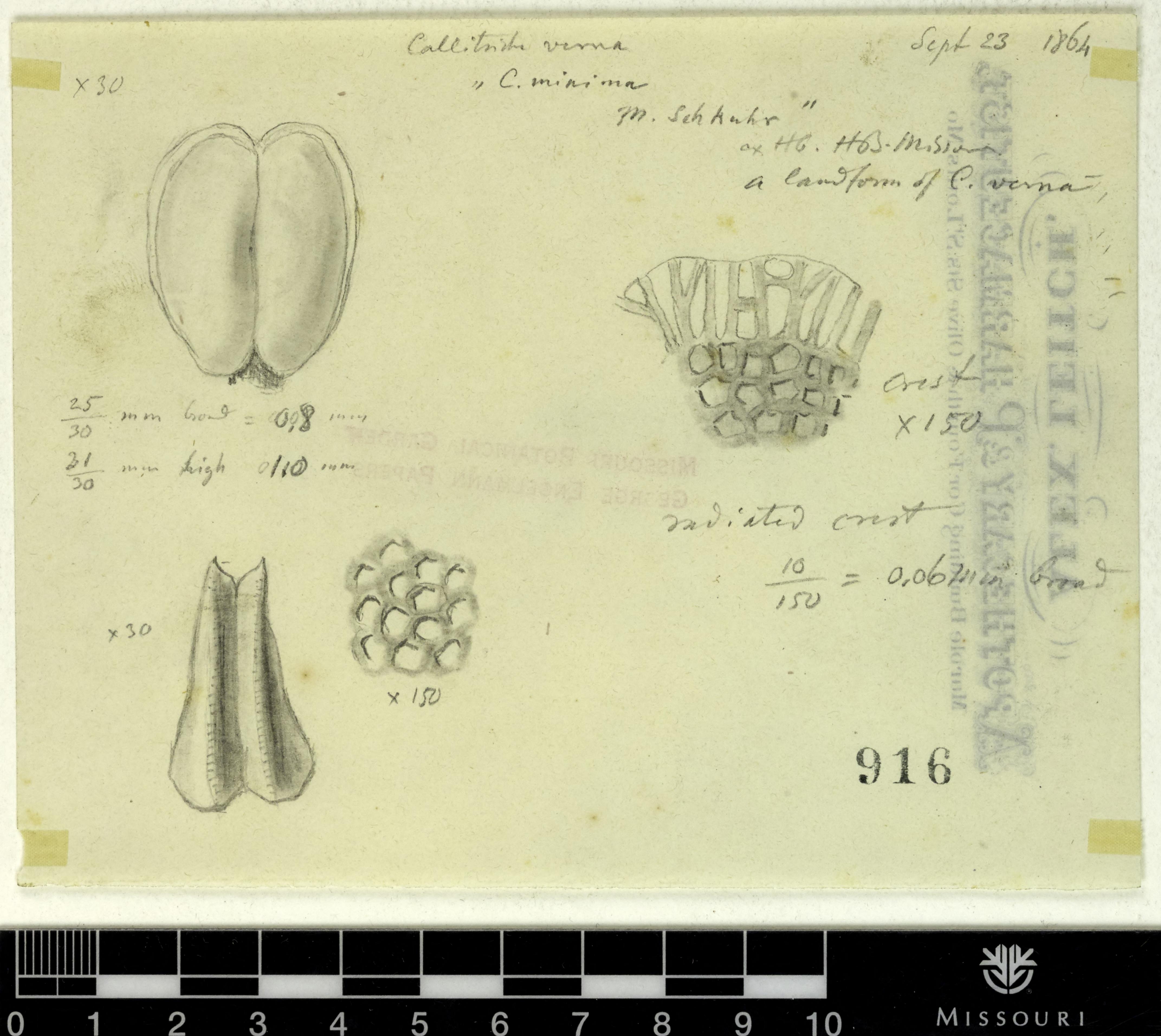




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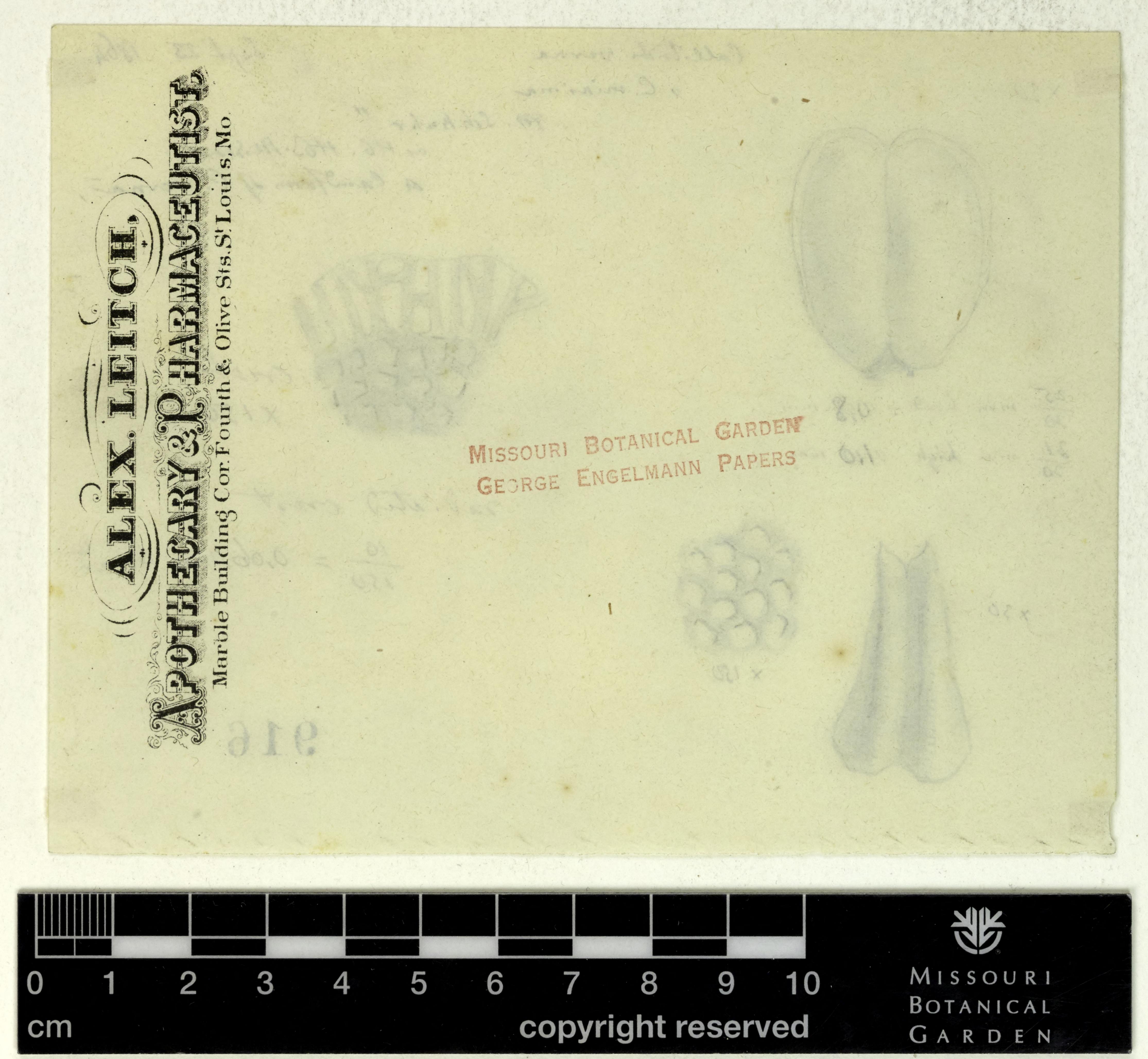


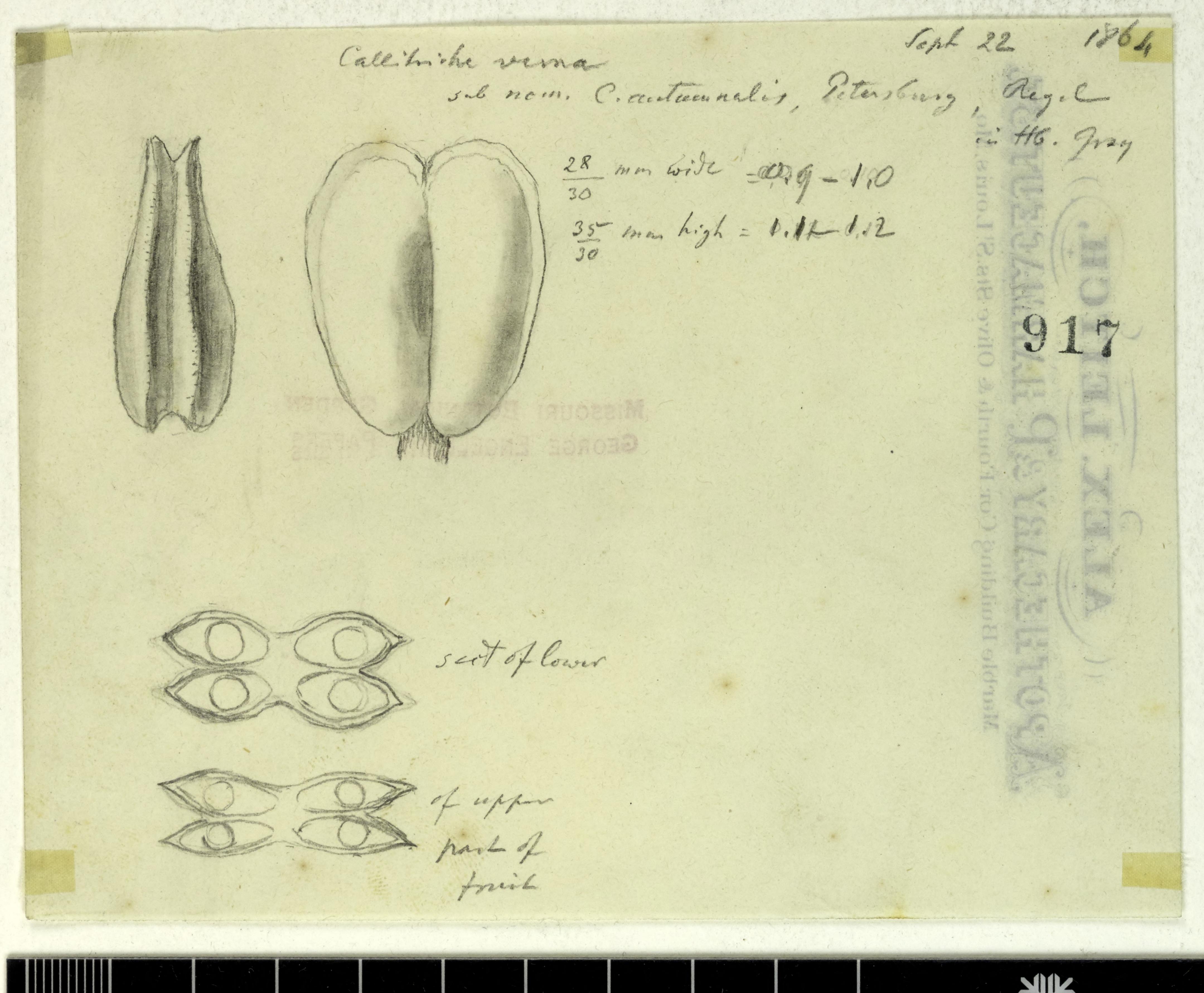
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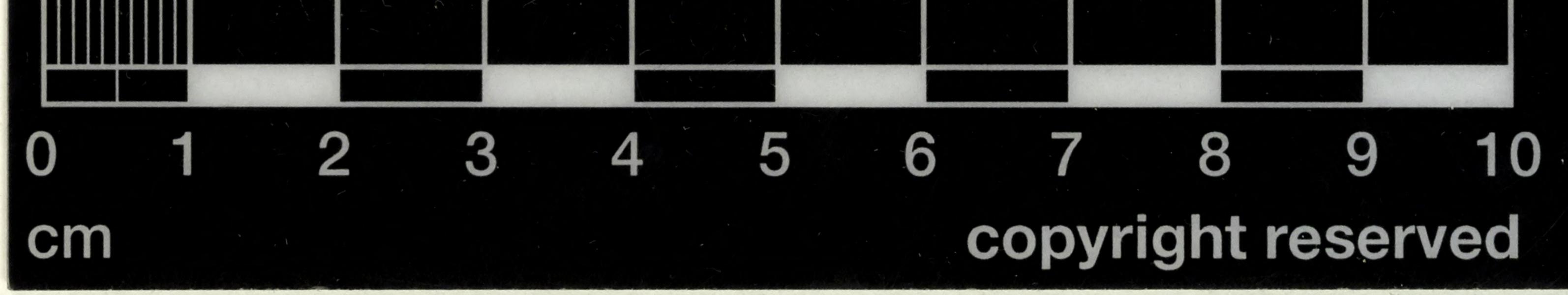
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